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CANADA

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ROYAL COMMISSION ON

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HEALTH SERVICES

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1965—VOLUME II



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## II

### ROYAL COMMISSION ON HEALTH SERVICES







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ROYAL COMMISSION ON

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HEALTH SERVICES

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1965 -- VOLUME II

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1965



TO HIS EXCELLENCY

THE GOVERNOR GENERAL IN COUNCIL,

MAY IT PLEASE YOUR EXCELLENCY,

We, the Commissioners appointed by an Order in Council dated 20th June, 1961, to inquire into and report upon the existing facilities and the future need for health services for the people of Canada and the resources to provide such services, and to recommend such measures, consistent with the constitutional division of legislative powers in Canada, as the Commissioners believe will ensure that the best possible health care is available to all Canadians:

BEG TO SUBMIT TO YOUR EXCELLENCY

THE SECOND AND FINAL VOLUME OF OUR REPORT





# *Elizabeth the Second*

BY THE GRACE OF GOD  
OF THE UNITED KINGDOM,  
CANADA AND HER OTHER  
REALMS AND TERRITORIES

## *Queen*

HEAD OF THE COMMONWEALTH,  
DEFENDER OF THE FAITH

A handwritten signature in dark ink, appearing to read "D. S. Maxwell".

ACTING DEPUTY ATTORNEY GENERAL

A handwritten signature in dark ink, appearing to read "J. B. [unclear]".

DEPUTY ADMINISTRATOR



TO ALL TO WHOM THESE PRESENTS SHALL COME OR  
WHOM THE SAME MAY IN ANYWISE CONCERN,

## *Greeting:*

WHEREAS pursuant to the provisions of Part I of the Inquiries Act, chapter 154 of the Revised Statutes of Canada, 1952, His Excellency the Governor in Council, by Order P.C. 1961-883 of the twentieth day of June, in the year of Our Lord one thousand nine hundred and sixty-one, a copy of which is hereto annexed, has authorized the appointment of Our Commissioners therein and hereinafter named to inquire into and report upon the existing facilities and the future need for health services for the people of Canada and the resources to provide such services, and to recommend such measures, consistent with the constitutional division of legislative powers in Canada, as the Commissioners believe will ensure that the best possible health care is available to all Canadians and, in particular, without restricting the generality of the foregoing, to inquire into and report upon

- (a) the existing facilities and methods for providing personal health services including prevention, diagnosis, treatment and rehabilitation;
- (b) methods of improving such existing health services;
- (c) the correlation of any new or improved program with existing services with a view to providing improved health services;
- (d) the present and future requirements of personnel to provide health services;
- (e) methods of providing adequate personnel with the best possible training and qualifications for such services;
- (f) the present physical facilities and the future requirements for the provisions of adequate health services;
- (g) the estimated cost of health services now being rendered to Canadians, with projected costs of any changes that may be recommended for the extension of existing programs or for any new programs suggested;
- (h) the methods of financing health care services as presently sponsored by management, labour, professional associations, insurance companies or in any other manner;
- (i) the methods of financing any new or extended programs which may be recommended;
- (j) the relationship of existing and any recommended health care programs with medical research and the means of encouraging a high rate of scientific development in the field of medicine in Canada;

- (k) the feasibility and desirability of priorities in the development of health care services; and
- (l) such other matters as the Commissioners deem appropriate for the improvement of health services to all Canadians,

and has conferred certain rights, powers and privileges upon Our said Commissioners as will by reference to the said Order more fully appear.

NOW KNOW YE that, by and with the advice of Our Privy Council for Canada, We do by these Presents nominate, constitute and appoint Chief Justice Emmett M. Hall of the City of Regina, in the Province of Saskatchewan, Miss Alice Girard, Registered Nurse, of the City of Montreal, in the Province of Quebec, Doctor David M. Baltzan, of the City of Saskatoon, in the Province of Saskatchewan, Professor O. J. Firestone, of the City of Ottawa, in the Province of Ontario, M. Wallace McCutcheon, Esquire, of the City of Toronto, in the Province of Ontario, Doctor C. L. Strachan, of the City of London, in the Province of Ontario, and Doctor Arthur F. Van Wart of the City of Fredericton, in the Province of New Brunswick, to be Our Commissioners to conduct such enquiry.

TO HAVE, HOLD, EXERCISE AND ENJOY the said office, place and trust unto the said Emmett M. Hall, Alice Girard, David M. Baltzan, O. J. Firestone, M. Wallace McCutcheon, C. L. Strachan, Arthur F. Van Wart, together with the rights, powers, privileges and emoluments unto the said office, place and trust of right and by law appertaining during Our Pleasure.

AND WE DO HEREBY authorize Our said Commissioners to exercise all the powers conferred upon them by section 11 of the Inquiries Act and be assisted to the fullest extent by government departments and agencies.

AND WE DO HEREBY authorize Our said Commissioners to adopt such procedure and methods as they may from time to time deem expedient for the proper conduct of the enquiry and sit at such times and at such places in Canada as they may decide from time to time.

AND WE DO HEREBY authorize Our said Commissioners to engage the services of such counsel, staff and technical advisers as they may require at rates of remuneration and reimbursement to be approved by the Treasury Board.

AND WE DO HEREBY require and direct Our said Commissioners to report their findings to Our Governor in Council, and file with the Dominion Archivist the papers and records of the Commission as soon as reasonably may be after the conclusion of the inquiry.


AND WE FURTHER appoint the said Chief Justice Emmett M. Hall to be Chairman of Our said Commissioners.

IN TESTIMONY WHEREOF We have caused these Our Letters to be made Patent and the Great Seal of Canada to be hereunto affixed.

WITNESS: The Honourable Charles Holland Locke, Puisne Judge of the Supreme Court of Canada and Deputy of the Honourable Patrick Kerwin, Chief Justice of Canada and Administrator of Our Government of Canada.

AT OTTAWA, this twenty-fourth day of July in the year of Our Lord one thousand nine hundred and sixty-one and in the tenth year of Our Reign.

*By Command,*

A handwritten signature in dark ink, consisting of a series of loops and flourishes, positioned above the printed title.

ACTING UNDER SECRETARY OF STATE



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## FOREWORD

In fulfilling our Terms of Reference, as provided for in Order in Council P.C. 1961-883, this Commission has presented its Report in two volumes. Volume I, tabled in the House of Commons on June 19, 1964, presented our main analysis of the health problems faced by, and the type and extent of health services available to Canadians, the gaps and inadequacies in such services, and what we consider the best means of meeting the needs of the nation in the various parts of the country, now and in the future, so as to ensure that the *best possible health care is available to all Canadians*. This, our second volume, rounds out our analysis in areas not covered in Volume I and it completes our Report.

We now spell out in Chapter 1 some of the basic requirements of the comprehensive Health Care Programmes which we recommended in Volume I, and dealt with in the analysis of that Volume, including the quality of health services and the freedom of both the providers and users of health services.

We then present, in Chapters 2 and 3, the requirements for health personnel not covered in detail previously, i.e., pharmacists, paramedical personnel, optometrists, opticians, podiatrists, ambulance personnel and drug-less practitioners including chiropractors, naturopaths and osteopaths.

The expansion and organization of health research and the integration and development of health statistics are reviewed in Chapters 4 and 5, with the increased importance of voluntary health organizations in comprehensive Health Care Programmes presented in Chapter 6.

Planning, co-ordination and organization of health services, at the federal, provincial, and local and community levels, with special emphasis on the requirements of the Northland, are the theme of Chapters 7, 8 and 9.

We presented in Chapter 2 of Volume I our Recommendations 1-200. We offer additional Recommendations numbering 201-256 in Volume II, with the reasoning underlying these recommendations spelled out in the text, where appropriate. In Chapter 10, we pull together Recommendations 201-256, and include addenda to Recommendations 59, 61, 62, 80, 109 and 195 made previously in Volume I.

In preparing the estimates on costs of the over-all programmes for health care for Canadians, allowance has been made for the recommendations

which we include in Volume II.<sup>1</sup> Some upward adjustments would be required for the financial implications of expanded research and public health programmes, the provision of medical libraries and certain special requirements to provide adequate health services for the Northern areas recommended in Volume II. The amounts involved, while substantial in themselves and of great importance to the success of these two types of programmes, are comparatively small in relation to total expenditures so that, as we said in Volume I, the cost figures submitted earlier can, for all practical purposes, be taken as the cost of the over-all programmes.

In preparing the Report of the Commission, we had the competent assistance of our staff, as listed in Appendix A of this Volume<sup>2</sup> and immeasurable help from many scholars who have, singly or in teams, prepared 26 research studies for us, as listed in Appendix B.<sup>3</sup> In particular we express our appreciation for the valuable help received from Dr. J. J. Madden of the University of Western Ontario. The Commission held 67 days of public hearings in every province of Canada and in the Yukon,<sup>4</sup> and it received submissions and heard representations from 406 organizations and individuals,<sup>5</sup> as listed in Appendices D and E in Volume I.

We emphasized in Volume I<sup>6</sup> and we wish to repeat here that time is of the essence in the development of certain health services such as the implementation of crash programmes for the education and training of health personnel, the expansion and organization of health research, the introduction of children's dental programmes and the provision of expanded health services for retarded and crippled children. Similar urgency applies to the expansion of the scope of the Hospital Insurance and Diagnostic Services Act, particularly the inclusion of mental health hospital services under the coverage of that Act. In fact we are heartened by the initiative shown by some of the provincial governments which are proceeding with the development of extensive programmes of education and training of health personnel, and we refer particularly to the imaginative programme involving \$100 million announced recently by the Ontario Government.

In other fields, no less important in the development of comprehensive and effective health services for all Canadians, haste should be made slowly because of the important long-term implications of the comprehensive programmes which we have recommended. We visualize that full implementation of the programmes may take seven years so that by 1971, Canadians would have all the health services which scientific genius and human skill can

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<sup>1</sup> See Volume I, p. xxii.

<sup>2</sup> There have been some staff changes since the preparation of Volume I (see Appendix C, Volume I, p. 888).

<sup>3</sup> For detailed acknowledgements, see Volume I, Appendix A, pp. 881-885.

<sup>4</sup> See Volume I, Appendix D, p. 889.

<sup>5</sup> See Volume I, Appendix E, pp. 898-903.

<sup>6</sup> See Volume I, Chapter 2, pp. 91 and 92.

create. We have also presented evidence that given the continued economic expansion of our country, which is fully realizable, Canada will have the means in terms of qualified manpower, capital facilities and financing to undertake these programmes without in any way interfering but, on the contrary, strengthening the economic capacity and growth prospects of our country.

We recommended in Volume I that a Federal-Provincial Conference be convened within six months of the tabling of that Volume, to initiate the necessary planning and fiscal arrangements for the co-ordinated implementation of the programme as a whole and to reach agreement on the implementation of the Health Services Programmes we have recommended.<sup>1</sup>

A preliminary and exploratory conference has already been held and the Canadian Government has announced that further conferences are planned. We cannot emphasize strongly enough that the programme which we have recommended is one which will only achieve its desired objective for the *best possible health care for all Canadians* if it is developed in co-operation between the federal and provincial governments and in full consultation with the health professions, the providers of the services. The prime responsibility of the provinces in the field of health services must be borne in mind and account must be taken of the changing pattern of the federal-provincial fiscal and constitutional arrangements. The developing opting-out procedures in respect to federal-provincial shared programmes are, in our opinion, fully reconcilable with the over-all objectives of the comprehensive Health Care Programmes recommended by the Commission and we make this point clear in Chapter 10.<sup>2</sup>

Health needs will change, and so will the means of meeting these needs. Organizational arrangements and methods of payment as between the private and the public sectors will be altered. Federal-provincial shared programmes may and can become co-operative programmes. But whatever the method, the determining factor must be to provide Canadians with comprehensive Health Care Programmes which Canadians want and which the economy is capable of providing.

To be truly effective and to implement the programme within the seven-year period we have suggested requires a flexible approach on the part of the framers of the programme, a willingness to give and take, and a realization that health, like prosperity and happiness, is indivisible.

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<sup>1</sup> *Ibid.*

<sup>2</sup> See addendum to Recommendation 195, p. 298.





## Basic Requirements

This Second Volume of the Commission's Report has a number of purposes. Among the most important are the following:

- (1) to treat those areas of health services and those categories of health personnel with which we were unable to deal fully in Volume I;
- (2) to present proposals for organization and administration of the recommended health services programmes.

In accordance with its Terms of Reference the Commission was directed to make recommendations to ensure "that the best possible health care is available to all Canadians". We have construed "best possible" to mean "of the highest possible quality". We consider quality as the most essential element in health services and every aspect of the programmes must be constantly directed to that end.

Inseparably linked to quality are the freedoms of the health professions and the freedom of the public as potential patients. These freedoms must be spelled out in the basic legislation, safeguarded through appropriate organizational arrangements, and mutually respected. To achieve the primary objective of quality, we need the fullest participation, both in planning and implementation, of the health professions, health agencies, voluntary organizations, governments and of the public. What this entails is outlined in this chapter and developed further in Chapters 7 and 8.

### QUALITY

Quality depends primarily on the supply, availability, knowledge, skill, and dedication of professionally qualified personnel, secondly, on the facilities at their disposal and, thirdly on the organization of the services. The preparation of qualified workers depends on the quality of the professional schools and in these there is a close relationship between the quality of instruction and the amount and quality of related research. Once graduated, the individual health practitioner is assisted in maintaining and improving quality by the requirements of his profession, standards for licensure, accreditation of hospitals, professional committees, continuing education, and the like.

Therefore, on the subject of quality, it cannot be emphasized too strongly that from first to last, quality of service rests in the hands of the medical profession, the dental profession, the nursing profession, and the other health professions. Judging from past experience, the Commission is convinced that with provision of the new and improved facilities, the extended financial assistance, and the organizational arrangements we have recommended, the professions working as individuals and in their collective capacities are an adequate guarantee that quality will continue to improve and, indeed, at a more rapid rate than in the past.

The Commission has been greatly impressed by the various factors that have contributed to rising qualifications of health personnel and the improvement of facilities, and its recommendations have been directed towards improving quality of education, more resources for continuing education, expansion of research, more thorough surveys of hospitals, more authority for professional bodies in the exercise of controls of standards and discipline, improved facilities in hospitals and group practice clinics, and greater participation of the health professions, particularly the medical profession, in the planning and development of health care programmes.

But there is a further element essential for high quality health care, and that is adequate time: time for investigation, time for diagnosis, time for the needed therapy. And this automatically raises the question of supply of health personnel in relation to the demands of patients. In the course of our hearings concern was expressed that the introduction of a universal programme of medical services would swamp the medical profession and automatically result in a deterioration of quality. The Commission made its recommendations for universal programmes with knowledge of this expressed apprehension and gave full consideration to all the evidence presented and, in particular, to the following:

- (1) the Canadian Medical Association said, "Insurance to prepay the costs of medical services should be available to all regardless of age, state of health or financial status."<sup>1</sup>
- (2) the Canadian Health Insurance Association said, "(1) The plan will make medical care insurance available to everyone in Canada. (2) Insurance companies will make available to everyone, regardless of age, condition of health, occupation or geographic location, two standard policies of medical care insurance as described in Appendix II. These policies will be made available on both an individual and a family basis."<sup>2</sup>

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<sup>1</sup> *The Canadian Medical Association*, brief submitted to the Royal Commission on Health Services, Toronto, May 1962, p. 79.

<sup>2</sup> *Canadian Health Insurance Association*, brief submitted to the Royal Commission on Health Services, Toronto, May 1962.

- (3) the programme in Alberta, drafted in co-operation with the Canadian Medical Association and the insurance industry, is designed to cover all residents of Alberta, those who will become insured by payment of their own premium and those who will be subsidized by government;
- (4) the proposed Ontario Act is also intended to cover everybody, again with the two categories of those who will pay their own premium and those who will require subsidy. Both the Canadian Medical Association and the insurance industry support this plan.

It is clear that the two stated policies and the two government programmes intend that every Canadian will have, or will be entitled to have, prepaid coverage enabling each and every one to seek the services of a physician and then to receive the services which, in his physician's judgment, are required. By advocating these proposals, and supporting the two programmes, the Canadian Medical Association and the spokesmen for the insurance industry are clearly in support of universal coverage and, therefore, it is implicit in these proposals that the medical profession is confident that it is now capable of meeting *all the needs of all Canadians for physicians' and surgeons' services on a prepayment basis*.

The Medical Services Programmes recommended by the Commission<sup>1</sup> are intended to achieve this very same objective, that is, *to meet all the medical needs of all Canadians on a prepayment basis*.

We conclude, therefore, that if the medical profession spokesmen are confident that they can meet all the needs of Canadians if they are insured through profession-sponsored prepayment plans and the insurance industry, then there need be no less confidence in the ability of the medical profession to meet the needs under the Medical Services Programmes recommended by the Commission.

Nevertheless, even if the demand for medical services would be the same, regardless of whether universal coverage is achieved under the auspices of a voluntary plan, a private insurance plan or a government plan, the question of volume of demand does need further consideration.

The question is, how much more care will be demanded under universal prepayment? This obviously depends on the demand emanating from those not now insured who will have the economic barrier removed. And this is clearly related to the amount of care they receive now.

The Canadian Medical Association's brief to the Commission is explicit on this point:

"It may be stated at the outset that relatively few Canadians have found that inability to pay for doctors' services is a deterrent to obtaining

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<sup>1</sup> See Volume I, Chapter 2, Recommendations 1, and 30 to 38, pp. 19-21, and pp. 32-34.



necessary medical care. Canadian doctors have long maintained the tradition of treating patients without regard to ability to pay and will continue to do so when circumstances warrant."<sup>1</sup>

In other words, there is a strong feeling among the profession that the basic needs of the uninsured population are being met, despite the serious economic consequences that may be borne by some patients and the burden of charity or of subsidy to others borne by the profession.

However, we do know that uninsured persons receive less care than do insured persons,<sup>2</sup> but the question is, should the 41 per cent of the population without *any* form of medical coverage in fact receive less care than the 59 per cent of the population with some form of protection?<sup>3</sup> In the opinion of the Commission the answer is no. The uninsured do require the level of health services available to the insured and the purpose of the universal prepayment programme we recommend is to make certain that the volume of essential services received by these uninsured eventually approaches the volume of essential care received by those adequately insured.

This, however, raises the question whether a prepayment plan encourages or induces a substantial volume of demands for unnecessary medical care simply because of the removal of the economic barrier to a desirable service. Is the increased demand arising from the introduction of a universal prepaid programme a demand for unessential health services?

There have been statements made recently by members of the medical profession in Canada that the introduction of a universal comprehensive prepaid medical care programme would lead to the unnecessary use of health services and they advocate as a remedy the policy of requiring the patient to pay part of the fee at the time he receives the service in order to induce a greater sense of responsibility in his demand for care.

But before applying such a remedy, it is essential that we be absolutely certain of the precise nature of the problem and, if the problem is correctly defined, that the remedy is, in fact, the proper one.

That the problem is incorrectly stated can be seen from the observations of the Medical Director of one of Canada's largest medical prepayment plans on the subject of utilization. He is Dr. W. B. Stiver, Medical Director of Physicians' Services Inc., Toronto, who wrote in the issue of July 13, 1963,

<sup>1</sup> *The Canadian Medical Association, op. cit.*, p. 81.

<sup>2</sup> Department of National Health and Welfare and Dominion Bureau of Statistics, *Volume of Health Care for Insured and Non-insured Persons*, Canadian Sickness Survey 1950-51, Ottawa: Queen's Printer, August 1961, p. 14.

<sup>3</sup> In 1961, over 7.5 million or 41 per cent of the population had no medical care insurance whatever, 1.0 million or 6 per cent were covered through membership in the Armed Services, R.C.M.P., the Swift Current Health Region or through programmes for the assistance to Indians, Eskimos, institutional residents and public welfare recipients, 9.7 million or 53 per cent of the population were covered through commercial insurance or prepayment plans, a sizeable proportion of whom had incomplete coverage. See Volume I, Chapter 18, p. 743.

of *News & Views on the Economics of Medicine*, a publication prepared by the Department of Medical Economics of the Canadian Medical Association:

"There appears to be a body of opinion in the medical profession which is also shared by interested laymen that over-utilization is entirely due to the programs of our physician-sponsored plans in Canada in which comprehensive medical care, including first-dollar coverage, is offered to employed groups. If you listen to the proponents of this opinion, you would think that prior to the advent of such plans there was no such thing as over-utilization of medical care. We know that this is not so. We are all aware of the fact that the pattern of practice of individual members of the profession varies a great deal. We see every-day examples of the possibly insecure physician who in his enthusiasm, or for other reasons, overserves the majority of his patients. This type of practitioner has been with us for many, many years, long before comprehensive prepaid medical care on a "service" basis was brought into being by the profession. We also know that there has been a certain segment of the population which has always demanded a great deal of medical care and which will continue to make unreasonable demands if not brought under control by the medical profession. In my opinion these are the two basic factors in utilization."

The problem also is incorrectly stated in that it assumes that it is only the poor who "abuse" prepaid services. Obviously, it is only those in the low income groups for whom a part-payment would have any economic significance and thus deter the use of health services. But surveys of the use of medical services show an extremely high correlation between high incomes and high use of services.<sup>1</sup>

To the extent that over-utilization or demand for unnecessary services is a problem—and its existence, though limited, cannot be denied—it is one which cuts across all income groups and is not concentrated in the poor.

Even so, there still remains the question whether part-payments are the remedy. Again, it seems to the Commission that Dr. Stiver's views, gained from his extensive experience, are incontrovertible when he says in the same article:

"We have in the medical profession today an opinion that the cure of over-utilization in prepaid comprehensive care is a combination of deterrents, deductibles and co-insurance now given the sophisticated name of "patient participation". It appears to me that the basis of this opinion is purely impressions. I know of no published work either in Canada or the United States which would indicate that patient participation has any worthwhile influence on utilization. We are told that it has, but I have yet to see a study that would substantiate such an impression."

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<sup>1</sup> Department of National Health and Welfare and Dominion Bureau of Statistics, *Illness and Health Care in Canada*, Canadian Sickness Survey 1950-51, Ottawa: Queen's Printer, July 1960, pp. 49, 53 and 55, and Health Statistics from the United States National Health Survey, *Medical Care, Health Status, and Family Income, United States*, Series 10—No. 9, U.S. Department of Health, Education, and Welfare, Public Health Service, Washington, D.C.: U.S. Government Printing Office 1964, p. 24.



We are compelled to conclude, therefore, that a policy imposing part-payment would simply deter the poor and have no effect on the unnecessary demands of those in middle- and high-income categories. Such a policy would mean that Canada was simply continuing to ration health services *on the basis of ability to pay*, a policy which was overwhelmingly denounced in submissions to the Commission.

The entire proposition must be rejected on the basis of an incorrect statement of the real problem.

As suggested, the remedy for such over-demand and over-servicing as do exist lies in "control by the medical profession". Fortunately, one regulating factor—the appointment system—is a characteristic of the Canadian pattern of practice. It has been frequently argued that the introduction of universal prepayment in Canada will result in a duplication here of what are said to be the "crowded surgeries of the British general practitioner". What this overlooks is that in England the general practitioner does not, except in rare instances, conduct his practice on an appointment system. Consequently, to the extent that English surgeries *are* overcrowded, it is obviously related in part to the fact that the physician has no idea on a given day how many patients will present themselves for attention. The English system is different and, therefore, not relevant to Canada.

Except for emergencies, which will not automatically increase because of universal prepayment, the great proportion of patients in Canada go to a physician's office by appointment. Physicians thus largely control the number of patients they will see on a given day by the number of persons they accept for appointment. We realize that the appointment system is subject to interruption by emergencies, phone calls, requests for repeat prescriptions, and the like. Those who cannot be seen immediately must wait for an appointment.

With the introduction of universal prepayment programmes, in the first stage, some will have to wait longer for an appointment but this, we believe, is a more equitable form of making available physicians' services than at present on the basis of ability or, more correctly, inability to pay.<sup>1</sup>

How much will the waiting periods be extended in the short term, that is, in the first five years? Without trying to answer the question quantitatively, certain relevant points may be made:

- (1) Home calls and night calls are obviously two of the most time-consuming and burdensome demands upon a physician. But changes in medical diagnosis and methods of treatment, aided by modern transportation, have made it both easier for and advantageous to the patient to call at the physician's office or to go or be taken directly to the out-patient department of a hospital where, in both cases, the

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<sup>1</sup> We refer here particularly to the uninsured who are unable to pay for health services and who may be receiving inadequate or no services.

facilities for diagnosis and treatment are at hand. The trend to specialization within the profession also has emphasized the value of office and hospital services in preference to home visits.<sup>1</sup>

- (2) There should be no important increase in night calls simply because there will be no relative increase in emergencies that require them. Emergencies such as heart attacks, strokes, acute anxieties, precipitate labors, etc., will continue to be unpredictable as to time, as will demands upon the obstetrician, but the fact of universal insurance will not affect the need arising therefrom. We know that events, such as accidents, epidemics and disasters, are translated into effective demand now.
- (3) The experience of utilization of services under prepayment makes clear that the fact of prepayment does not result in an immediate release of pent-up demand. Rather, demand increases gradually as people become educated to the availability of services and their use. The statistics of utilization in Manitoba Medical Service, for example,<sup>2</sup> show the following pattern of demand for new subscribers over an eight-year period: (a) virtually no change over the period in the demand for in-hospital services, (b) a gradual rise in demand for home and office calls, resulting in an increase over the eight-year period of about one-third, (c) a gradual rise in demand for laboratory and X-ray services over the period, an increase totalling about 40 per cent, (d) a gradual rise in total services, amounting to about one-third. Stated in other terms, during the first two or three years of being insured, a person receives only about three-fourths as much care as the person insured continuously seven or eight years. Demand for services is thus a factor of education in their use.
- (4) The Saskatchewan experience since 1962 does not appear to have created an undue burden either on physicians or patients resulting from the introduction of their Programme. If the fears expressed proved valid they could have been expected to produce excess demands on physicians' time. Moreover, all the provinces from Quebec west have a physician-population ratio equal to or better than that of Saskatchewan. The situation in the Atlantic Provinces is not as favourable and, therefore, active recruiting of personnel will be necessary. The rate at which demand will increase in this region will depend on the education and time factors mentioned above.

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<sup>1</sup> We recognize, of course, that the home care programme we have recommended will increase the number of home calls, but it will do this by equivalent or greater savings on hospital calls.

<sup>2</sup> Berry, C. H., *Voluntary Medical Insurance and Prepayment*, a study prepared for the Royal Commission on Health Services, Ottawa: Queen's Printer, Table 6-9 (*in press*).

These are, as we suggest, the immediate short-run factors. Over the long run, say, after the first six or eight years, other factors will enter the situation.

A good deal of comment has centred on the contention that, whatever the short-run effects, the introduction of a universal health care programme will result in a deterioration of quality over the first ten-year period. We categorically reject this forecast and the reasoning underlying our judgment is as follows:

- (1) There has been no suggestion that deterioration of quality will ensue if Canadians are universally insured through physician-sponsored prepayment plans and commercial insurance. Accordingly, we conclude that there is no more reason to assume that quality will deteriorate if universal coverage is achieved through government-sponsored prepayment. However, *if* deterioration will ensue under either method, then the problem becomes one of ascertaining why quality should deteriorate and of taking steps not only to prevent deterioration but to make certain that quality is improved.
- (2) As we said above, one of the chief factors influencing quality of care is time for patients, and the chief factor determining available time is the ratio of personnel to population to be served. On this issue the Commission has realistically recommended a "crash programme" of immediate expansion of our medical, dental and nursing schools. The Commission has also recommended generous professional training grants to attract not only the best students but also to provide for an expansion and up-grading of the faculties of professional schools. For example, the provision of bursaries of \$2,000 for medical and dental students in their final two years will attract into those professions a host of able young people previously denied such opportunity by the prohibitive costs of professional education. Adequate remuneration for interns and the up-grading of hospital teaching resources should induce more Canadian graduates to remain in Canada, as will the financial assistance for post-graduate specialization. And there are other factors that will improve quality and enhance the effectiveness and "productivity" of the physician: continuing development of new methods of treatment; new and more effective equipment; continuing discoveries of "wonder" drugs; the probability of a break-through in research in cancer, heart disease, or arthritis; rapid expansion of group practice clinics; closing of the distance between patients and physicians through modern means of communication and transportation; new emphasis on health education; and, not least, better organization and co-ordination of all health services. In view of all these expected developments it would, indeed, be a man of no confidence who would counsel despair or pessimism.



- (3) Again, on the positive side, another factor to consider is that the insuring of a given population group has always attracted more physicians to give service, in part, because physicians' incomes are higher. Within three years of the introduction of the Swift Current Medical Insurance Programme the number of physicians practising in the region increased by nearly 50 per cent, while the population served remained relatively stationary. Moreover, even the Saskatchewan experience is encouraging. As we indicated in Volume I, it is our opinion that the introduction of that programme was attended by much unnecessary bitterness and disagreements, and should not, therefore, be considered as typical. No programme could really succeed without harmony. Prior to and immediately after its beginning there was both a decline in the number of physicians entering the province and an increase in those leaving, resulting in 1962 in a lesser number of physicians than in 1959 (878 compared to 972). However, as the programme settled down and as most of the anticipated anxieties did not materialize, there were, by July 1, 1964, 1,002 physicians or 124 more than in July 1962 (49 being Canadian graduates and 75 from abroad).<sup>1</sup> We can hope, therefore, that the introduction of universal insurance in Canada will reduce our present losses to the United States and will result in Canada becoming self-sufficient as the new medical schools are established and existing schools expanded.
- (4) There is still another consideration, namely, the ultimate effects of modern preventive medicine on the volume of health services. The medical profession and other health organizations have had for a long period far-sighted and worthwhile programmes of public education directly and through the news media on the merits of regular examinations and early consultation of physicians at the first indication of any adverse health condition. The result of this has been an increasing awareness on the part of the public of the importance of consulting physicians at an early stage and on a continuing basis. The closer relationship between people and physicians augurs well for the future in that it will contribute to an improvement in the quality of medical services and will reduce the time needed for treatment and the costs that arise when early conditions are neglected.

The Commission does not wish to convey an impression that it believes that demands on our health resources will not increase. On the contrary, it is the purpose of the programme to increase services by seeing that all genuine health needs are met. Nor does the Commission believe that there

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<sup>1</sup> Report of Saskatchewan College of Physicians and Surgeons, *Saskatoon Star Phoenix*, September 4, 1964.

will not be increased pressures on health personnel. There will be heavy demands upon physicians just as there are heavy demands upon physicians today. The crowded physician's office is not something new. It has been the normal condition since the end of World War II. The Commission does believe, however, that the demand will not be excessive in the early stages but will develop gradually. Paralleling that increase, the expansion of the educational facilities we recommend will provide the additional personnel necessary to meet these extra needs and to give the overworked physician the time not only for the performance of his professional duties but time for a normal life with his family and time for continuing education and research.

## FREEDOM WITHIN THE HEALTH SERVICES PROGRAMMES

With quality of health care and its availability to all as a central theme of Volume I, the other major theme was freedom. Our recommendations concerning the provision of health services, rather than envisaging a centralized monolithic bureaucratic organization, are characterized by a desire for diversity, for the participation of all kinds of institutions, private, voluntary, professional and public, in meeting the health needs of Canadians. Freedom is a fundamental feature of the Health Services Programmes. The co-ordination of health services and the planning of future development of the Health Services Programmes is not to be concentrated in one centralized body. Rather, we see the closest co-operation among health professions, voluntary organizations, governments, and the public in establishing the paths along which the programmes will progress. Freedom, therefore, has three aspects: (1) its application to the physician, (2) its application to the patient, and (3) its application to research and innovation. We summarize here these points in the Commission's recommendations.

### (1) *Physician*

The most fundamental feature of the programmes recommended is that they are based on free, independent, self-governing professions. The provision of and payment for services is to be the result of a negotiated contractual relationship based principally on the fee-for-service concept. The physician continues in private practice. He renders the service which, in his judgment, his diagnosis indicates. The state does not interfere in any way with his professional management of the patient's condition, nor with the confidential nature of the physician-patient relationship. *Only the manner of receiving payment is altered.* No one can seriously suggest that any one method of receiving payment is sacrosanct or that it has any therapeutic value. In fact, there is good reason to believe that eliminating the financial element at time of receiving service does have a salutary effect on the patient,



and on the physician-patient relationship. Moreover, any physician is free to practise independently of the programme, either wholly or partially. There will undoubtedly be some patients who, though covered, will elect to make private financial arrangements to avail themselves of the services of such physicians. In such cases, the physician would look for payment only from the patient. Such arrangements would operate independently from the programme we have recommended and thus would not be contrary to the principle of extra billing rejected by us.<sup>1</sup>

The emphasis on the freedom to practise should not obscure the fact that the physician is not only a professional person but also a citizen. He has moral and social obligations, as well as self-interest to do well in his profession. The notion held by some that the physician has an absolute right to fix his fees as he sees fit is incorrect and unrelated to the mores of our times. This nineteenth century *laissez-faire* concept has no validity in the twentieth century in its application to medicine, dentistry, law, or to any other profession, or, in fact, to any other organized group. Organized medicine is a statutory creation of legislatures and of parliament. When the state grants a monopoly to an exclusive group to render an indispensable service it automatically becomes involved in whether those services are available and on what terms and conditions.<sup>2</sup>

## (2) Patient

The patient will be as free to choose his physician as he is now but it should not be overlooked that freedom to seek needed health services will be greatly expanded by accessibility to the services for another ten million Canadians by the elimination of the financial barrier between the patient and his physician.

The method of prepayment which we recommend in no way alters the individual's responsibility to use prudently and wisely the increased health services to be rendered by an expanding supply of health personnel and particularly the physician. We emphasized this point strongly in Volume I when we said:

"The Commission believes that the individual's responsibility for his personal health and that of the members of his or her family is paramount to the extent of the individual's capacities. Briefs from the health professions and other experts, and studies by our research staff emphasize the wide scope that the individual has for the determination of his own health and well-being. With the near-disappearance of most communicable diseases, that range of self-determination has increased. Personal hygiene, cleanliness in the home, balanced diets, precautions against accidents, adequate rest, regular exercise, wise use of time for leisure and recreation; in short, temperate living—all of these are not only of first importance in the maintenance of health but are largely under the control of the individual, and in our opinion, are clearly his responsibility.

<sup>1</sup> See Volume I, Chapter 2, p. 29.

<sup>2</sup> *Ibid*, Chapter 1, p. 12, 8(c) and Volume II pp. 229 and 230.

"However, in this day of advanced medical knowledge and skill, these are not enough. The individual must assume responsibility for wise and prudent use of health services, for periodic health examinations, including regular dental examinations, for assuring that the mother receives complete pre- and post-natal care, for seeing that children are properly immunized, and at the first sign of symptoms for consulting a physician or dentist. The wise use of available health services cannot be over-stressed. Much serious illness and unhappiness would be avoided if this were done. It goes without saying that since all such resources are scarce, it is the duty of the individual, as well as of the practitioner prescribing them, to see that the services are used with prudence and economy."<sup>1</sup>

This concept of freedom and responsibility on the part of the individual involves in no way a transfer to the state of any of his obligations for the maintenance and advancement of his health. The individual's responsibility remains paramount. Up to the present the principal impediment to the full exercise of that responsibility has been removed for only about half the population. The introduction of universal programmes throughout Canada will remove it for the other half.

We interpret "freedom" of the patient broadly to include his right to seek services wherever he may choose, including from physicians practising independently of the programme,<sup>2</sup> and the right to purchase from commercial and other carriers additional insurance coverage as he may see fit such as sickness income maintenance, adult dental services, and private duty nursing, etc., just as now, under the present hospitalization programme, he may purchase insurance to cover the cost of semi-private or private accommodation and of private duty nursing care, etc. Such an arrangement would be similar to recent developments in England where coverage may be purchased to pay for services received from a physician other than the one with whom the patient is registered.

### (3) *Research and Innovation*

The Commission has also recognized that continuing improvements in quality, effectiveness, and efficiency depend upon the existence of an organizational structure that provides for freedom to do research and to innovate, and the opportunity for creative people to do new things, or old things in new ways. The existence of ten provincial programmes, the variety of ways through which health services can be provided within each programme, the stimulation of research provided by the Health Sciences Research Council and the increased number of University Medical Centres, enhance the likelihood of experimentation and innovation and assure as well as anything can in contemporary society that there will be an absence of conformity and constraint in adjusting to the changing patterns of future development.

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<sup>1</sup> See Volume I, Chapter 1, pp. 3 and 4.

<sup>2</sup> See pp. 10 and 11.

## VOLUNTARY ORGANIZATIONS

Another essential in this context of freedom is the opportunity for voluntary organizations to play their part, along with private practitioners and government bodies, in the future organization and provision of health services.

The Health Charter emphasizes "the necessity of retaining and developing further the indispensable work of voluntary agencies in the health care field", and the Commission's statement of basic concepts stresses the function of voluntary action as the mainspring for most progress in our open society. The full force of this mainspring must continue to be directed toward three major objectives:

- (1) continuation, expansion and modification of existing programmes;
- (2) the ascertaining of existing unmet needs;
- (3) experiment and innovation in developing new programmes to meet those needs.

It is in these ways, as we said, that progress will continue and, we believe, at an accelerated rate.

We are aware, of course, that the introduction of ten provincial Health Services Programmes on the scale we have recommended will inevitably affect most, if not all, of the existing voluntary health agencies in Canada. For many, the comprehensive services will mean the achievement of objectives for which they have worked for many years and a lesser need for soliciting funds; for some, it will mean released funds which will enable other aspects of their programmes to be strengthened; for others, it will mean increased responsibilities and activities as their services are sought by provincial programmes.

Unfortunately, there has been in the minds of some people a tendency to categorize action in the health and welfare field as being either strictly voluntary or strictly governmental and to assume, further, that any extension of government action must be to the detriment or at the expense of voluntary action. Whatever validity this view has elsewhere, it has no validity in Canada. On the contrary, what is most striking about Canadian experience is the extent to which governments at all levels have fostered and assisted in the financing of voluntary organizations, joining with them in the achievement of mutual objectives. For example, in 1963-64, over \$250,000 in grants were made available by the Department of National Health and Welfare to national voluntary agencies. The National Cancer Institute, a voluntary research agency, receives over \$2.5 million annually from joint Federal-Provincial grants. About 15 per cent of the revenues of the Canadian Arthritis and Rheumatism Society come from government sources. Also through the National Health Grants Programme assistance has been given to pro-



vincial heart foundations for research and assistance to societies for crippled children, cerebral palsy, tuberculosis, mental health and rehabilitation. Often this assistance has taken the form of matching grants from both the federal and provincial governments.

But there are other forms of voluntary agency-government relationships. One of the most important is through the purchase, on a fee basis, of services provided by voluntary agencies, perhaps the most typical being the services of visiting nurse and homemaker organizations. Undoubtedly one of the most dramatic examples of joint voluntary agency-governmental co-operation is the Blood Bank service of the Canadian Red Cross and the provincial hospital insurance plans. The voluntary agency performs a service that government probably could not achieve or could achieve only with difficulty and high cost. Governments, on the other hand, assume financial responsibility of a magnitude beyond the capacity of voluntary effort.

Still another way in which co-operation is achieved is through the appointment of voluntary advisory committees to health departments and the appointment of government officials to the boards of directors of voluntary agencies. These provide for a continuing exchange of information and opinion and assist greatly in achieving progress in the health field. We foresee a major expansion of this type of consultation and joint endeavour through the establishment of advisory committees and health planning councils recommended elsewhere in our Report.<sup>1</sup>

We believe this pattern of voluntary agency-government co-operation to be a highly desirable characteristic of our Canadian democracy; we believe it will be expanded. Both types of agency have specialized functions to perform, and it is evident from the many briefs submitted to us and from our own findings, as well as from the examples of other countries, that there is more to be done in raising the level of well-being of all our citizens than the combined efforts of individuals, voluntary agencies and governments can possibly accomplish in the foreseeable future.

## CO-OPERATIVE PLANNING

Another feature designed to ensure that the Health Services Programmes meet the needs of the present and are adapted to meet the changing needs of the future is the provision for representative Health Services Commissions and for advisory health planning councils at regional, provincial and federal levels. These will present adequate opportunities for assessment of needs, evaluation of programme performance, and sound planning for the future. Although planning councils will have only advisory functions, their authority will depend upon their wise use of the broad information available to them and on the quality of their recommendations. Considering the impact

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<sup>1</sup> See Chapters 7 and 8.

on public opinion and on the commissions that such recommendations will create, their influence on the availability and quality of service should be enormous. The members of these councils will know that the enlightened self-interest of the public will be best served by making the health programmes so excellent that not only are the people well served, but the health professions become so attractive that an expanding stream of highly qualified young people are annually recruited to them.

We see these planning councils becoming important forums where informed lay people and representatives of professions, voluntary associations, and governments meet together to examine, consider, weigh, and plan for the improvement of health services. With the full and free flow of information among these various groups, together with a similar flow among federal, provincial and regional councils, planning for health services in Canada should move forward on a basis of fact and informed opinion of purposes, methods, and costs, not previously experienced.

## RESEARCH

Research and education are the prime movers of the twentieth century. It is these two forces that account for the extraordinary advances in science, technology, and skill on which our health services now so greatly depend.

Although Canada is justifiably proud of the scientific contributions of many of its researchers, some of whom are world-renowned, the facilities and financial resources needed to support health research have not kept pace with the expanding needs of this dynamic field. In particular, we have been informed that teachers in Canadian medical schools, with the ability to do high quality research, have been insufficiently supported with staff so that their teaching and administrative responsibilities reduce their research output. The inadequacy of teaching budgets has had as its consequence the loss of Canadians of great promise to the United States.<sup>1</sup>

It is evident that Canadian governments have not given priority to the needs of health research, this despite the large sums that have been made available for treatment services. In 1962-63, expenditures by the Federal Government for the support of medical and dental research—including pharmacological research—amounted only to \$11.3 million of which \$8.5 million was allocated to universities and associated institutions.<sup>2</sup> The limited nature of this support has meant that health research in the universities has been restricted partly through the inability of universities to afford qualified personnel and partly through the difficulties faced by university personnel in obtaining adequate research funds.

<sup>1</sup> MacFarlane, J. A., *et al.*, *Medical Education in Canada*, a study prepared for the Royal Commission on Health Services, Chapter 10, Ottawa: Queen's Printer (*in press*).

<sup>2</sup> See Table 4-3.



The limited support of Canadian governments<sup>1</sup> has been offset, to some extent, by grants from the United States Government through the National Institutes of Health. In recent years these institutes have provided substantial funds for the support of research in medical, dental and other scientific areas by Canadians in Canadian universities. In 1962-63, this support amounted to \$2.3 million.

However, since the completion of Volume I of our Report, the United States Government has indicated a modification of this policy and in the future Canadians will be eligible for American research funds on a progressively reducing scale. It is not simply a matter that this loss will put a stop to much important research in Canada; the real danger is that there will be an immediate exodus of highly qualified researchers, an acceleration of the "brain drain" that has traditionally depleted Canada's resources. This is a crucial shortage that even the expenditures of very large sums of money in a short period of time can correct only with difficulty. To a considerable extent, qualified research workers in Canada now obtain some support from government, voluntary or foreign sources for their research activities. The funds are not sufficient to do all that could be done, but few go without funds altogether. What limits research even further is the scarcity of personnel engaged in medical and dental education who carry out health research as part of their normal activities. Manpower shortages, arising from the failure to expand medical and dental educational facilities, besides limiting the supply of physicians to care for the health of Canadians, also have limited the amount of health research.

The withdrawal of United States support only adds greater urgency to the actions we recommend to expand greatly the facilities and trained manpower needed both to provide for medical and dental education and health research in Canada. While there is no absolute and objective gauge of what would constitute adequate funds for health research, there are clear indications that support, both in the past and present, has been insufficient.

Moreover, research in the field of health must be expanded. The case for expansion of pure and clinical research is self-evident and generally accepted. Not only is the expansion necessary for the direct contributions to prevention and treatment that will ensue, but because of the contribution to improved teaching in our professional schools that will result. But one of the most important areas for expansion is that which has come to be called "operations research". We need to evaluate existing health programmes as well as the new ones to be established. We should be undertaking compre-

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<sup>1</sup> Although it is difficult to make an absolute judgment about the priorities in types of research, it is worth pointing out that the United States Government allocates 4.8 per cent of all its research expenditures to health and welfare and the Canadian Government allocates only 2.0 per cent to this field. See *Organization for Economic Co-operation and Development, Science, Economic Growth and Government Policy*, Paris: The Organization, 1963.

hensive analyses of hospital design, of the desirable relationships between chronic, convalescent and active treatment services, of the effectiveness of current health education methods, of the possibility of improving methods of processing physicians' accounts in the prepayment plans, of maximizing the participation of private physicians in public health, of the value of multi-phasic screening, of the curricula for professional training, of administration in hospitals, of use of nurses' time; the list is endless, and the possibilities of improvement unlimited.

It is only through intensified research that we can hope to come nearer the solution of many of our serious health problems. We cannot sit back and let others do the research from which we may hope to benefit. Just as we share health problems with other countries, we also share the obligation to contribute to their solution. We are as much concerned as others with the advancement of knowledge in this field and, last but not least, we can attract and hold qualified personnel only if they are given the opportunity to carry out research in the subject matter fields of their choosing. This applies to those practising in the health professions as well as those who are to teach the coming generations of practitioners and researchers alike.

## ORGANIZATIONAL ARRANGEMENTS

In Chapters 7 and 8 we turn to a discussion of how to improve the organization and co-ordination of our health resources and services to make them more effective in achieving our health goals. As we indicated in Volume I, the health services area of our economy lags behind other areas in developing the means whereby the totality of our knowledge and skills is made available to potential patients. Much progress has been made and these chapters, although breaking no new ground, do consider ways and means of building upon and extending methods already in operation.

The proposals with respect to planning and organization reflect the main theme of our other recommendations: the emphasis on freedom of professions and the availability of high quality care. In short, the objective is to create (1) democratic planning councils that will be concerned with long-range planning and (2) independent health services commissions that will be representative of professions, public and government. By these two types of organizations the people of Canada can be assured that their true needs are met and the professions can be certain that there will be no interference in their freedom to practise as their own high standards dictate. These arrangements will also provide for a much greater degree of co-operation on the part of professions, voluntary organizations, and government agencies than is possible now. The Commission is convinced that by the development of the Health Sciences Research Council we shall obtain more and better information on which decisions can be made. By the development of national,

provincial and regional planning councils we can make certain that the information is used to make the right decisions. By the establishment of the representative Health Services Commissions we can ensure that the decisions are acted upon to improve quality, make service more readily available, close gaps, and remove duplication and fragmentation.

We visualize these organizational arrangements to take full effect over the period 1965 to 1971, as the broad range of health services, educational, research and capital facilities programmes which we have recommended are implemented.

In Chapter 9, we deal more specifically with the necessity to regard health services in the North as an integral part of a broader programme embracing education, housing, sanitation and employment opportunities without which no real or permanent progress can be achieved.

## CONCLUSION

The principle which has dominated our thinking is that money spent on essential health care is money well spent, an investment in human resources that will pay handsome dividends not only in terms of economics but in human well-being. It is, however, an investment in which all Canadians must have the opportunity to participate. We felt compelled to adopt the relatively simple method of having the Federal Government and the Provinces subsidize ten provincial insurance funds rather than the cumbersome device of subsidizing millions of individuals because it is evident that this is the only way to guarantee accessibility to the health services *all* are entitled to seek and to have.

The right to education is one now universally recognized in Canada. It is an entrenched right which no one would dare to challenge. It is now beyond question that all our young people must be better educated and more competently trained if Canada is to survive in this highly competitive age of specialization and automation. It is equally true that health services are as much an investment as education. Health services and education must now be regarded as twin endeavours, advancing mankind. Neither will attain its full potential for good if one is allowed to lag behind the other. Progress in one must be paralleled by progress in the other. The fruits of this progress must be available to all—not just to those whose incomes are high enough to pay the premiums demanded to provide coverage against expenditures for physicians services alone, but to everyone, and for the whole range of health services, including hospital care, dentistry, drugs, home nursing, and optical services.

No matter how successful our health services, however, and regardless of ways and means of preserving and maintaining good health, there are limitations, imposed by nature, to life and health, which mortal man must accept.



The fruits of research and better health will nevertheless further extend the life span from the three score years and ten which Canadians have already reached. We have referred to the many hazards in our environment such as radioactive fallout and other forces and substances, as yet not fully recognized or evaluated in their effect upon the health of the living and, through genetic effects, also upon the life and health of yet unborn generations. The recognition and control of them and other hazards, both natural and man-made, remain among the great challenges to health research and its application by the individual and by the health services at his disposal.

What we have tried to avoid is the perpetuation in Canada of dual classes of citizenship, one of which will be inferior or second class merely from the fact of the disparity in incomes. All must have access to needed health services through the same door. Canada cannot have millions of its citizens obtain health services through a back door bearing the sign, "This way for those to be means tested".

We cannot emphasize too strongly that health services are not "welfare" services, although it is only too true that lack of health services leads directly to the need for welfare services. Welfare costs attributable to poor health conditions and services have long been a charge on the public sector of the economy. As we said in Volume I: "Many of our so-called 'welfare' expenditures are the end result of illness, disability, and premature death. Not all of these expenditures are avoidable, of course, but clearly many of them are".<sup>1</sup> But there is no sharp line dividing cause and effect in these fields, for many health expenditures are occasioned by inadequate living conditions. Expenditures in the public health field have also long been a charge on the public sector and every inhabitant, rich or poor, has benefited from them. These services are necessarily provided by government at some level because they affect all citizens. They exist to guard against the spread of contagious disease and to secure public safety, and thus involve community action.

Personal health services and public health services complement each other. But personal health services are only one aspect of the total health problem. That personal health services should engage public interest far greater than all the other services is natural because it is an area where new ideas and important changes are rapidly appearing. Contemporary prepaid medical services insurance is in this category. Prepayment plans were introduced by voluntary non-profit agencies, by hospital associations, by the insurance industry, and more extensively by the medical associations. The value of their experience is great. The popular demand for prepayment coverage is evident in the number enrolling in these plans, and is underscored by the proposals to the Commission to extend prepaid insurance to cover everybody regardless of age or condition. To accelerate the achievement of this

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<sup>1</sup> See Volume I, Chapter 1, p. 6.

objective, we recommended Canadian-designed Health Services Programmes organized on a provincial basis and to be developed in stages. The personal health services would be financed by an insurance mechanism best suited to the needs of all Canadians, and which offers the best possible incentives and encouragement to all those upon whom these services depend. As we have said, the central figure in the personal health services complex is the physician; he alone is directly connected with all the related health service branches and all other health professions.

It is implicit in the term "health care" that the services be comprehensive. The sum total of all health services comprises comprehensive health care. We recommend what must be made available—the instruments for planning, education, research, co-ordination, and implementation. At the same time, there is no compulsion to render services or to utilize those that are made available. The providers of, and those who utilize, the health services share equal responsibility in the supply, availability, and prudent use of the services and facilities.

As we have been careful to point out, good health care is expensive and we have been realistic in our estimates of costs. We have deliberately taken a cautious view by projecting only an average increase in the annual output of the economy and a high estimate of increasing costs of health services. But two things must be clearly appreciated: first, the only thing more expensive than good health care is inadequate or no health care; and second, the bulk of the expenditures to be made on health care will be made even if there are no programmes. Such increases as will occur will result from higher quality services and an increase in volume of services received by people who were previously uninsured. There will be no increase in total costs resulting from the shift of health expenditures from the private to the public sector of the economy. In fact, as we have shown, there will be substantial savings through lower administrative costs.<sup>1</sup>

We have in Canada a land of immense resources. We must use them for the good of all Canadians. We have here an opportunity to build upon the northern half of this continent a nation of educated and healthy people. Nature itself favours such a possibility. Admitting that climatic conditions in the northern areas are often forbidding, nevertheless the country as a whole is singularly free of those hazards to good health to be found in so many parts of the world. It is for us so to organize our resources in harmony with our favoured situation that Canada may become a showplace of man's humanity to man. We will rightly stand condemned by history if we fail to do what our people need and what our resources and our know-how make readily possible.

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<sup>1</sup>See Volume I, Chapter 18, p. 745.



## Pharmacists

The growing importance of drugs and medications in therapy makes it important to consider the changing role of pharmacists in the provision of health services during the last fifty years or so in Canada, the corresponding adjustment in their training and formal education, and to present certain basic information about their number, geographical distribution, recruitment, utilization and other characteristics. The Commission's recommendations concerning the introduction of a Prescription Drug Benefit within the Health Services Programmes<sup>1</sup> require also an estimate of future requirements and expected supply of pharmacists in this country.

### CHANGING ROLE OF PHARMACISTS AND ADJUSTMENT IN THEIR EDUCATION

Pharmacy may be defined as the profession whose contribution to health services is the preparation and distribution of drugs used in the diagnosis, treatment, and prevention of disease. To be licensed to practise, the pharmacist in almost all provinces must qualify by successful university training and satisfy provincial licensing legislation.<sup>2</sup> His principal duties include the compounding and dispensing of drugs prescribed by physicians and dentists, the determination of their potency, toxicity, therapeutic activity,

<sup>1</sup> See Volume I, Chapter 2, Recommendations 58-60, p. 41.

<sup>2</sup> Licensing of pharmacists in Canada is the responsibility of the provincial statutory bodies which are charged with the administration of the Pharmacy Professional Act, or its equivalent, in their respective provinces. Such licensing is granted on the basis of differing combinations of academic qualifications and internship (usually 12-18 months) from one province to another. However, professional licensing is principally required of pharmacists in the retail practice of the profession. The provinces of Saskatchewan and British Columbia require also that all hospital pharmacists be fully licensed. The degree of Bachelor of Science in Pharmacy is a prerequisite to licensing in all provinces except in Newfoundland where formal training in pharmacy is acquired through the master-apprenticeship method and administered by the licensing body itself.

dosage form, potentiality as compared with other drugs, synergism in combination, and the application of legal procedures in the use of drugs. Pharmacists' knowledge must also include the standardization, analysis and critical evaluation of medical materials and pharmaceutical preparations.<sup>1</sup> Pharmacists are employed in retail pharmacies, hospitals, government laboratories, manufacturing pharmaceutical establishments, and by drug distributing firms. The pharmacists who complete graduate studies may also be engaged in research and teaching.

Since the beginning of this century, and particularly, during the past two or three decades, rapid and significant developments in drugs have altered the nature of the practice of pharmacy which have necessitated a change in the education and training of pharmacists. The education of pharmacists prior to Confederation was informal and the training followed the master-apprenticeship system of qualifying for the handling and dispensing of drugs. The pharmacist carried in his dispensary only a small number of medicines and the prescriptions demanded only a limited knowledge of mixing and compounding techniques. The training then was designed for this type of practice. Later in the nineteenth century, formal education was introduced when specific course requirements plus internship were demanded by provincial pharmaceutical organizations; such courses were usually of one to two years' duration at the end of which a diploma was granted. Gradually, however, the formal training of pharmacists was turned over to recognized universities while licensing continued to be the responsibility of professional associations, operating under provincial legislative authority.

The development of new drugs such as antibiotics, tranquilizers, antihistamines, steroid hormones, and other chemical agents, has imposed new tasks and responsibilities on pharmacy practitioners. Twenty-five years ago, about three-quarters of the drugs and chemicals used in today's modern therapy were unknown. Formerly, the introduction of a new medicament was rare, whereas at present over 400 new preparations appear annually. To operate an efficient pharmacy today requires thousands of compounds and preparations.<sup>2</sup> There is every indication that the discovery of new drugs and medicaments will continue unabated, because of the increased emphasis on research and the active search for remedies for cancer, mental diseases, cardiac conditions and other chronic diseases.

The discovery and development of the new drugs and medicines require expensive manufacturing equipment, research facilities and highly trained personnel. No longer is the pharmacist expected to extract, synthesise, prepare and compound the new medicaments. During the last two or three

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<sup>1</sup> *The Canadian Pharmaceutical Association, Inc.*, brief submitted to the Royal Commission on Health Services, Toronto, May 25, 1962, p. 10.

<sup>2</sup> Morrison, F. A., *Recruitment, Education and Utilization of Pharmacists in Canada*, a study prepared for the Royal Commission on Health Services, Part II, Chapter IV, Ottawa: Queen's Printer (*in press*).

decades the method of dispensing drugs has completely changed. A quarter century ago, approximately 80 to 90 per cent of the prescriptions written required basic compounding, but today quite the opposite is found to be the case as approximately nine-tenths of all prescriptions call for precompounded medications, while the remainder requires compounding by the pharmacist.<sup>1</sup> The role of the pharmacist as a compounder and chemical formulator has changed largely to one of the dispenser of complex drugs.

The fact that medication is largely precompounded in no way lessens the educational requirements of the modern pharmacist to prepare him for the safe handling and dispensing of the large number of pharmaceuticals currently available and new items coming on the market in increasing numbers and varieties. It has been suggested that a retail pharmacy today is becoming gradually a "public health information centre" and a pharmacist a "consultant on drugs" for the community.<sup>2</sup>

In the light of these changing conditions, the Canadian Conference of Pharmaceutical Faculties in 1950 approved a four-year university curriculum after Senior Matriculation or its equivalent as the requirement for the degree of Bachelor of Science in Pharmacy.<sup>3</sup> The extension of the period of education from three to four years of university training along with its broadening in scope to include professional courses indicated the desire to keep pharmaceutical education both professional and broadly based.<sup>4</sup> By 1962-63 this programme was accepted and implemented by the eight schools of pharmacy.<sup>5</sup>

All programmes offered in Canadian pharmacy schools provide for specialization at the undergraduate level in retail, hospital, and industrial pharmacy. Since 1958 every school has expanded its facilities and when present building programmes are completed, these facilities will have increased by at least 50 per cent. In 1962 it was stated that this expansion would "... serve the needs of the undergraduate programme with its foreseeable future enrolment for the next five years".<sup>6</sup>

Graduate degrees are offered in six schools, three of these (the universities of British Columbia, Saskatchewan and Manitoba) offer the Master of Science (Pharmacy) only, and the other three (the universities of Alberta, Toronto and Montreal), the Doctor of Philosophy (Pharmacy).

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<sup>1</sup> *Ibid.*

<sup>2</sup> *Ibid.*, Part II, Chapter I.

<sup>3</sup> In the case of the Maritime College of Pharmacy admission is based on Junior Matriculation and in the two schools in the Province of Quebec a baccalaureate degree or its equivalent is required.

<sup>4</sup> Of the total study time (3,200 hours), 15-20 per cent was devoted to the humanities and 30-35 per cent to the basic sciences.

<sup>5</sup> In 1962-63, the Faculty of Pharmacy at the University of Alberta offered as an optional course a four-year programme following Senior Matriculation leading to a Bachelor of Science in Pharmacy (Honours). The present requirement for licensing in Alberta, however, is a three-year degree programme, Morrison, *op. cit.*, Part II, Chapter I.

<sup>6</sup> Morrison, F. A., *op. cit.*, Part II, Chapter II.



Until five years ago, candidates for the Ph.D. degree in pharmacy had to study outside Canada while the M.Sc. (Pharmacy) degree has been available in Canada for a somewhat longer period of time. These programmes provide pharmacists for research and teaching in Canada.

Five of the eight pharmacy schools are autonomous organizations within their university administration; the other three are parts of other faculties. Thus, at the universities of Manitoba, Laval and Dalhousie, the School of Pharmacy is located in the Arts and Science Faculty, the Faculty of Medicine, and the Faculty of Health Services respectively.

## SUPPLY AND DISTRIBUTION OF PHARMACISTS

The total number of pharmacists in Canada is difficult to assess. A survey undertaken on behalf of this Commission revealed that in 1962 there were 9,401 pharmacists practising in Canada.<sup>1</sup> This count is incomplete as not all pharmacists responded to the survey questionnaire but based on the number identified, the population-pharmacist ratio in Canada in 1962 was 1,975. Of the pharmacists identified, 9,166 were licensed, the remainder practising in hospitals where a licence is not a prerequisite for practice.

**TABLE 2-1 POPULATION-LICENSED PHARMACIST RATIOS, CANADA AND PROVINCES, 1955 AND 1962**

Province	1955	1962
Newfoundland.....	4,721	4,393
Prince Edward Island.....	2,857	2,944
Nova Scotia.....	2,970	3,202
New Brunswick.....	3,162	3,679
Quebec.....	4,873	3,530
Ontario.....	1,487	1,575
Manitoba.....	1,607	1,535
Saskatchewan.....	1,682	1,691
Alberta.....	1,875	1,829
British Columbia.....	1,392	1,425
Yukon and Northwest Territories.....	14,500	7,800
CANADA		
Population-Licensed Pharmacists Ratios....	2,070	2,026
Number of Licensed Pharmacists.....	7,584	9,166

SOURCE: Ross, T. M., *Pharmacist Manpower in Canada*, a study prepared for the Royal Commission on Health Services, Chapter 2, Ottawa: Queen's Printer (*in press*).

<sup>1</sup> Ross, T. M., *Pharmacist Manpower in Canada*, a study prepared for the Royal Commission on Health Services, Chapter 4, Ottawa: Queen's Printer (*in press*).



Because detailed information is available concerning licensed pharmacists only, the ensuing analysis excludes those who hold a university degree in pharmacy and practise their profession but are not licensed. The number excluded is small and would not affect the analysis significantly.

Between 1955 and 1962 the number of licensed pharmacists increased by 20 per cent, from 7,584 to 9,166. During the same period the population of Canada increased by 18 per cent. Consequently, there has been no appreciable change in the population-licensed pharmacist ratio over the last seven years as there were 2,026 Canadians per licensed pharmacist in 1962 compared with 2,070 in 1955.

Table 2-1 shows the wide variation in the provincial ratios both in 1955 and 1962. In the latter year there were 1,425 persons per licensed pharmacist in British Columbia while the corresponding figure for Newfoundland was 4,393. It is notable that all the western provinces and Ontario have consistently registered more favourable ratios than the national average during that period. The population-licensed pharmacist ratios deteriorated more in the Maritime Provinces than elsewhere between 1955 and 1962.

An important aspect of the growth in the supply of licensed pharmacists is the increasing number of women entering the profession. During the last decade the practice of pharmacy has become remarkably attractive to women with the result that the number of female licensed pharmacists increased by 57 per cent, from 534 to 840, between 1955 and 1962. Women pharmacists accounted for 11 per cent of all licensed pharmacists in 1962 as compared with 8 per cent in 1955. The concentration of female licensed pharmacists was highest in Alberta where they represented almost one-fifth of the province's pharmacist manpower in 1962. Female pharmacists tend more strongly than males toward hospital practice with over a quarter of them employed in hospitals while less than 5 per cent of males are so employed.

The rural-urban distribution of licensed pharmacists is shown in Table 2-2 which reveals the concentration of pharmacists in larger cities. In addition to the personal preference for urban living, common to most Canadians, larger cities provide an opportunity for the employment of pharmacists in the pharmaceutical industry, hospitals, universities and laboratories. Table 2-2 also shows that while 30.4 per cent of the population lived in rural areas, only 6.4 per cent of licensed pharmacists were located in such areas. This is due to the fact that most less densely populated areas cannot support a privately owned retail pharmacy store. However, with the improvements in transportation a substantial proportion of the rural population has more adequate access to the services of pharmacies located in adjacent towns and cities. In other areas, where there are no pharmacies, some of the required drugs are provided by practising physicians themselves.

**TABLE 2-2 PERCENTAGE DISTRIBUTION OF  
POPULATION AND LICENSED PHARMACISTS,  
BY SIZE OF LOCALITY, CANADA, 1962**

Size of Locality	Population	Pharmacists
Village — farm or rural.....	30.4	6.4
Town — 5,000 or less.....	7.8	12.1
Cities — 5,000-50,000.....	12.8	24.4
50,000-100,000.....	5.6	7.2
100,000-200,000.....	5.3	7.4
Over 200,000.....	38.1	42.5

SOURCE: ROSS, T. M., *Pharmacist Manpower in Canada*, a study prepared for the Royal Commission on Health Services, Chapter 3, Ottawa: Queen's Printer (*in press*), and Bulletin 1.1-7, Dominion Bureau of Statistics, Census of Canada 1961, Ottawa: Queen's Printer, 1963.

## PHARMACY GRADUATES AND STUDENTS

Immigration has not been an important source of supply of pharmacists in Canada in the past and has become increasingly less so over the last five years. In 1962 the survey of pharmacists in Canada revealed that only 4.3 per cent were foreign-born and foreign-trained and only 15.5 per cent of these immigrant pharmacists had come to Canada in the five-year period preceding the survey year.<sup>1</sup> This trend is likely to continue since rising pharmacy educational standards in Canada may discourage immigrant pharmacists seeking practice in this country. Pharmacy immigration gains have largely been offset by Canadian pharmacists leaving for the United States. The number of Canadians studying pharmacy in the latter country is very small. Still, those who study in the United States tend to remain in that country after graduation. Consequently, the graduates from the eight Canadian schools of pharmacy are the main source of supply of the nation's pharmacists. Table 2-3 shows the number of graduates during the period 1948 to 1963.

Between 1948 and 1963, Canadian schools of pharmacy have produced 5,016 graduates or an average of 314 per annum. The actual number of graduates each year shows a marked variation between the maximum of 427 in 1949 and the minimum of 240 in 1958. As indicated in Table 2-3 there were two distinct trends in graduation, one from 1948 to 1954 and the other from 1955 to 1963. The average number of graduates per year in

<sup>1</sup>Ross, T. M., *op. cit.*, Chapter 2.

TABLE 2-3 GRADUATES OF CANADIAN SCHOOLS OF PHARMACY, 1948-1963

Year	Graduates	Year	Graduates
1948.....	310	1956.....	294
1949.....	427	1957.....	262
1950.....	391	1958.....	240
1951.....	354	1959.....	254
1952.....	370	1960.....	270
1953.....	377	1961.....	281
1954.....	347	1962.....	281
1955.....	265	1963.....	293

SOURCE: Figures for 1948-1960, see Ross, T. M. *Pharmacist Manpower in Canada*, a study prepared for the Royal Commission on Health Services, Chapter 2, Ottawa: Queen's Printer (*in press*); data for 1961-1963 are from Dominion Bureau of Statistics, Education Division, Higher Education Section, Ottawa: Queen's Printer.

the former period was 368 and in the latter, 271. The greater number of graduates between 1948 to 1954 is a reflection of the increased number of veterans graduating. The sizeable reduction in the annual number of graduates after 1954 also reflects the fact that most schools shifted from a three-year to a four-year programme. Recently, the number of pharmacy graduates has tended to rise again.

Table 2-4 gives the annual enrolment of pharmacy schools in Canada between 1947-48 and 1963-64. After making allowances for post-war veteran enrolment and concurrent courses the data show two noteworthy trends. The first is that women constitute an increasing proportion of total pharmacy undergraduates. Thus in 1963-64 almost one out of every three pharmacy students was female as compared with one out of every ten in 1950-51. With an increasing enrolment of women, pharmacy may be faced with the problem of premature retirements. The professionally active years of women are as a rule shorter than those of men. Most women may work only during the early part of marriage or until they have children and then either leave the profession entirely or seek part-time work. Some may return later to the profession as their children grow up or other contingencies make this necessary. If this trend were to continue, schools of pharmacy may have to train more pharmacists than would otherwise have been required.

Secondly, a career in pharmacy apparently is becoming relatively less attractive to the young people in Canada. Pharmacy enrolment grew at a rate faster than that of total university enrolment in the early years of the period under review and reached a peak in 1952-53 when it was 2.4 per cent of total university enrolment. Since then growth patterns have been reversed and comprised only 1.1 per cent of total university population in

**TABLE 2-4 UNDERGRADUATE PHARMACY STUDENT ENROLMENT, BY SEX, AND AS A PERCENTAGE OF TOTAL UNDERGRADUATE ENROLMENT, CANADA, 1947-48 TO 1963-64**

Year	Undergraduate Pharmacy Student Enrolment			
	Total	Male	Female	Per Cent of Total University Enrolment
1947-48.....	1,271	86.5	13.5	1.7
1948-49 <sup>a</sup> .....	1,111	88.7	11.3	1.7
1949-50.....	1,432	87.8	12.2	2.3
1950-51.....	1,383	89.2	10.8	2.3
1951-52.....	1,355	88.4	11.6	2.3
1952-53.....	1,367	87.4	12.6	2.4
1953-54.....	1,256	87.0	13.0	2.2
1954-55.....	1,212	84.7	15.3	2.0
1955-56.....	1,199	82.5	17.5	1.8
1956-57.....	1,145	82.9	17.1	1.6
1957-58.....	1,100	80.1	19.9	1.4
1958-59.....	1,219	77.1	22.9	1.4
1959-60.....	1,307	74.4	25.6	1.4
1960-61.....	1,482	73.3	26.7	1.4
1961-62.....	1,529	74.4	26.0	1.3
1962-63.....	1,636	71.5	28.5	1.2
1963-64.....	1,665	70.0	30.0	1.1

<sup>a</sup>Excluding University of Montreal.

SOURCE: Dominion Bureau of Statistics, *Fall Enrolment in Universities and Colleges*, 1947 to 1961. Data for 1961-1964 are from Dominion Bureau of Statistics, Education Division, Higher Education Section, Ottawa: Queen's Printer.

1963-64. However, in absolute terms the number of graduates has increased since 1958. It has been reported that approximately 25 to 30 per cent of those who begin training at schools of pharmacy do not graduate. Students who withdraw do so mainly for academic reasons.<sup>1</sup>

Pharmacy students are drawn from all levels of economic background. However, most come from middle income families since about half of the students estimated the average annual income of the chief wage earner in his family was below \$6,000 in 1962, and only about one-sixth estimated this income at \$10,000 or more.<sup>2</sup>

The average pharmacy student spent \$1,550 in the 1961-62 academic year, \$543 of which could be directly attributed to education expenses and

<sup>1</sup> Morrison, F. A., *op. cit.*, Part IV, Summary and Conclusions.

<sup>2</sup> Ross, T. M., *op. cit.*, Chapter 2.



the remainder for living and social costs. This annual expenditure was approximately equal to that of the average engineering student, but was at least 25 per cent lower than the expenditure of students in law, medicine or dentistry. The pharmacy student achieves these lower expenditures as compared with the other three categories of students by spending less on living costs. Naturally, the pharmacy student's expenditures tend to vary according to marital status, whether living at home or elsewhere, and according to the region of the country in which the student attends college. Savings from summer employment and funds from the family together accounted for over one-half of the average pharmacy student's income. The average pharmacy student received a considerably larger portion of his income from earnings from part-time jobs during the school year than did students in engineering, law, medicine and dentistry. About half of the pharmacy students relied on part-time employment.

About 29 per cent of pharmacy students received financial aid from scholarships and bursaries in 1961-62; this percentage was smaller than that of students in the other faculties compared. The average scholarship and bursary income per student receiving assistance amounted to \$336, an amount slightly higher than that received by law and dentistry students and lower than that received by students in engineering or medicine.<sup>1</sup>

We conclude that the financial problems of the pharmacy students are the same as those of most other university students and that no special financial barriers prevent their entering pharmacy school.

## DEMAND AND UTILIZATION

The demand for professional personnel in all branches of pharmacy in Canada has rapidly increased over the last decade under the impact of several factors. Naturally, these factors did not affect all branches of pharmacy uniformly but they affected some branches more directly than others. These factors are generally socio-demographic and institutional in nature.

The growth in Canada's population increased the volume of illness and the demand for drugs. This indirectly increased the number of pharmacists required at the production and distribution levels as well as in government agencies inspecting and testing these drugs, and in pharmacy faculties instructing a growing student body. Other demographic trends served to magnify this demand. For example, the increasing proportion of the very young and older people in our population structure contributed to a greater

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<sup>1</sup> Dominion Bureau of Statistics, *University Student Expenditures and Income in Canada, 1961-62*, Ottawa: Queen's Printer, 1963.

use of medication. Superimposed on these demographic factors was the changing attitude of Canadians concerning the use of drugs. Canadians like most other people want to get well as quickly as adequate health services and new "wonder" drugs make this possible. Modern drugs in many cases accomplish just this, with the result that most Canadians, when ill, increasingly consider drugs as a necessity. Consequently, during the decade 1951-1960 the total value of prescriptions dispensed in this country rose by over 150 per cent, from \$52 million to \$131 million. During the same period the number of prescriptions per capita increased from 2.21 to 2.41.<sup>1</sup> The ensuing analysis appraises demand and utilization conditions in each field of pharmacy separately.

### *Retail Pharmacy*

The growing utilization of prescribed drugs in Canada has resulted in an increase in the demand for pharmacists at the retail level where approximately three-quarters of all prescribed drugs are dispensed. In 1962, the 5,022 retail pharmacies employed a major proportion of all pharmacists—7,972, or 87 per cent, of all licensed pharmacists. The average number of pharmacists per retail pharmacy in that year was 1.6.

The demand for retail pharmacists also has been strongly influenced by institutional forces. As pointed out earlier, the trend for most medicinal supplies to be in a form suitable for dispensing has reduced the time necessary to fill a prescription. On the other hand, because of new discoveries as well as the competition among drug manufacturers, the number and complexity of pharmaceutical products have increased. Thus, while the pharmacist spends less time in actually dispensing drugs, the time required to maintain a satisfactory service, to maintain extensive inventories, keep abreast of new developments, provide information to physicians and customers has increased considerably. Furthermore, as a consequence of the increased government requirements for safeguards, the retail pharmacist is required to spend more time keeping detailed accounts of all purchases and sales of a wide variety of drugs. The pharmacist's work has not, on the whole, become less time consuming but has changed in character.

Within the field of retail pharmacy, non-professional activities including merchandising of non-prescribed drugs and other commercial operations continue to absorb a substantial share of the pharmacist's work-day. In 1960, prescribed drugs comprised only 25 per cent of the total sales volume of retail pharmacies. As a practical consequence of this, the retail pharmacist in 1962 filled on the average 96 prescriptions in a 44-hour week, while the hospital pharmacist filled 504 in a 39-hour week. In other words,

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<sup>1</sup> *The Canadian Pharmaceutical Association, Inc.*, brief submitted to the Royal Commission on Health Services, Toronto, May 1962, p. 123.

whereas the hospital pharmacist, on the average, filled 13 prescriptions every working hour the retail pharmacist filled only 2.2.<sup>1</sup>

Despite the present concentration of pharmacists in retail pharmacy, it has been suggested that there is a shortage of pharmacists in this field of practice. In the evidence presented to the Commission it was argued that this shortage was the principal reason for the failure of the number of retail pharmacies to keep pace with the growth of population in Canada between 1955 and 1962.<sup>2</sup> The average number of people served by each pharmacy rose from 3,317 to 3,698 during this period. Moreover, the Pharmacist Survey conducted by the Commission in 1962 suggests that retail pharmacies would have employed an additional 2,056 pharmacists if they had been available. This number when added to the number of pharmacists actually employed in that field indicates a desired ratio of 2 pharmacists per retail pharmacy.

Manpower requirements, however, must be based on the efficient utilization of personnel. That is, the retail pharmacist should be engaged as far as possible exclusively in performing professional tasks. The Pharmacist Survey indicated that, in 1962, 45 per cent of retail pharmacists spent less than one-quarter, and a further 33 per cent spent between one-quarter and one-half of their working hours filling prescriptions.<sup>3</sup> This suggests that given a functional re-organization of the practice of retail pharmacy and a relegation of commercial and non-professional activities to less qualified personnel, the existing number of retail pharmacists could handle a larger volume of prescriptions. The pharmacists' continued participation in non-professional activities indicates an inefficient utilization of their professional services and implies that the shortage of professional staff is not substantial.

The projected growth of population will, of course, require more pharmacists if the present population-pharmacist ratio is to be maintained while the increased volume of prescribing, resulting from our recommendations in the area of prescribed drugs, could be met by retail pharmacists reducing their non-professional activities.<sup>4</sup> In this area the pharmacist's work would also be facilitated by the Commission's recommendations relating to the National Drug Formulary and Drug Information Service that would issue periodic bulletins providing the latest information on drugs.<sup>5</sup>

### *Hospital Pharmacy*

The main function of the hospital pharmacist is the dispensing, distribution and control of all drugs and medicines issued to patients and hospital departments.

<sup>1</sup> Ross, T. M., *op. cit.*, Chapter 4.

<sup>2</sup> *Ibid.*

<sup>3</sup> *Ibid.*

<sup>4</sup> See Volume I, Chapter 16, pp. 653 and 654.

<sup>5</sup> See Volume I, Chapter 2, Recommendation 62, p. 42.



With the increased volume of hospital care in Canada and the growing use of prescription drugs, drug utilization in our hospitals has steadily increased and by 1960 hospitals accounted for one-quarter of all drugs purchased in this country.<sup>1</sup> For these reasons there has been an increase in demand for hospital pharmacists. The Pharmacist Survey conducted by the Commission showed that in 1962 about 600 pharmacists, one-third of whom were not licensed, were working in hospitals. The high proportion of non-licensed practitioners is due to the fact that at present in only two provinces is licensing a prerequisite for the practice of hospital pharmacy.

Freed from the necessity of conducting retail commercial activities hospital pharmacists are almost exclusively engaged in professional duties. Thus, approximately 50 per cent of them spend over half of their work-day filling prescriptions and about 20 per cent of them spend three-quarters of their time at this work.<sup>2</sup> The balance of their time was devoted largely to administrative duties connected with the operations of the hospital.

Despite the increase in the number of hospital pharmacists, many Canadian hospitals, though generally only the small hospitals, are without the services of a pharmacist. In 1961, 604 reporting public general hospitals with 99 or fewer beds employed only 56 pharmacists, while the 199 reporting hospitals with 100 to 499 beds accounted for 333 pharmacists, and 31 hospitals with 500 beds and over employed 196 pharmacists.<sup>3</sup> Moreover, the majority of hospitals employing pharmacists indicated that their pharmacist manpower was inadequate. Thus 233 hospitals indicated a total shortage of about 150 pharmacists.<sup>4</sup>

The Canadian Society of Hospital Pharmacists stated that, on the basis of their standard,<sup>5</sup> in 1961 a work force of 2,480 pharmacists was needed to provide adequate pharmaceutical services in hospitals in Canada. This would imply that only about one-quarter of our needs for hospital pharmacists was met in that year. The above figure represents an ideal level of hospital service rather than an effective demand for hospital pharmacists, as the majority of the "needed" 1,900 pharmacists, even if they were available, would probably not have found employment in hospitals because of budgetary restrictions.<sup>6</sup> Although the scarcity is perhaps not as acute as the Society

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<sup>1</sup> The Canadian Pharmaceutical Association, Inc., submission to the Restrictive Trade Practices Commission, October 1961, Toronto, p. 51.

<sup>2</sup> Ross, T. M., *op. cit.*, Chapter 4.

<sup>3</sup> Dominion Bureau of Statistics, *Hospital Statistics 1961*, Volume III, Ottawa: Queen's Printer, 1964.

<sup>4</sup> Ross, T. M., *op. cit.*, Chapter 4.

<sup>5</sup> The Society's standard was—hospitals of 75 beds and over one full-time pharmacist and an additional pharmacist for each additional 100 beds or major portion thereof; hospitals of 74 beds or less, one part-time pharmacist. *Canadian Society of Hospital Pharmacists*, brief submitted to the Royal Commission on Health Services, Toronto, May 1962, p. 30.

<sup>6</sup> Ross, T. M., *op. cit.*, Chapter 4.



suggests, there is undoubtedly a shortage of manpower in this field. This shortage was estimated to be between 300 and 400 in 1962.<sup>1</sup>

The hospital pharmacists, as earlier stated, spend most of their time performing professional activities. Changes in the character of their practice, therefore, cannot be expected to relieve the existing shortage of this type of personnel. The problem is essentially one of increasing the supply although some assistance could be provided through the use of the part-time services of retail pharmacists. That is, retail pharmacists located in less densely populated areas could provide a local hospital with pharmacist services on a part-time basis.

### *Pharmaceutical Industry*

The rapid increase in drug utilization in Canada has stimulated a corresponding growth of the Canadian pharmaceutical industry. This over-all expansion of the output, and the tendency among the pharmaceutical firms to introduce a large variety of similar drugs, have led to an increase in the number of pharmacists employed in the drug manufacturing industry. The vast majority of these pharmacists are engaged as sales representatives of pharmaceutical firms in medical promotion and detailing. In addition to being employed as sales representatives, pharmacists are also engaged in research, production, quality control and product development programmes.

A survey was undertaken for this Commission covering the majority of all pharmaceutical firms employing pharmacists which located 612 pharmacists in the Canadian drug manufacturing industry in 1962.<sup>2</sup> In that year, according to the responding firms, an additional 456 pharmacists could have been employed in the industry if these had been available at prevailing salaries. Assuming that non-respondents experienced a similar shortage the industry could have employed an additional 515 pharmacists. The majority of those unfilled positions were for medical representatives for which the pharmacist's knowledge makes him a prime candidate; some, however, were for scientific personnel.

Since science graduates in other fields can fulfil the position of detail men<sup>3</sup> and the shortages that exist in the area of research, quality control, production and product development also can be met to a considerable extent from persons who have advanced scientific degrees but who do not possess a basic education of pharmacy, the apparent scarcity of personnel is much less severe.

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<sup>1</sup> *Ibid.*

<sup>2</sup> A survey of drug manufacturers conducted by The Canadian Pharmaceutical Manufacturers Association for the Royal Commission on Health Services; Ross, T. M., *op. cit.*, Chapter 4.

<sup>3</sup> For a discussion of the need for detail men in the pharmaceutical industry, see Volume I, Chapter 16, pp. 664-666.

### *Staff of Schools of Pharmacy*

The demand for pharmacists by schools of pharmacy is, generally, for those with advanced degrees. In 1962, 78 pharmacists were employed on the staffs of these institutions. In view of existing student enrolment the current demand for pharmacists in university faculties is being adequately met. However, it has been suggested that with increased student enrolment and more intense competition between universities and the pharmaceutical industry for better qualified pharmacists, a shortage of pharmacy professors may develop in the future.<sup>1</sup> Moreover, the implementation of the Commission's recommendation that the Federal Government expand research grants to universities through the Health Sciences Research Council to encourage the development of new drugs and/or improvement of existing drugs in Canada will result in additional demand for pharmacists with advanced degrees.<sup>2</sup>

### *Government Services*

In 1962, the Federal Government employed 37 pharmacists and provincial governments 14.<sup>3</sup> Sixteen of the federally employed pharmacists worked as food inspectors for the Food and Drug Directorate and the Division of Narcotic Control of the Department of National Health and Welfare.

It has been estimated that in 1962 there were 13 vacancies at the provincial level and 19 at the federal level of government.<sup>4</sup> The implementation of the Commission's recommendations regarding the Drug Advisory Committee, a National Drug Formulary and an Information Service,<sup>5</sup> will also result in an increased demand for pharmacists employed by the Federal Government.

### *Armed Services*

In 1962, 77 pharmacists were employed in the three branches of the Armed Services and 13 established positions were unfilled.<sup>6</sup> The present policy of integrating the three branches of the Armed Services may tend to reduce the demand for pharmacists from this source.

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<sup>1</sup> *Canadian Conference of Pharmaceutical Faculties*, brief submitted to the Royal Commission on Health Services, Toronto, May 1962, p. 28.

<sup>2</sup> See Volume I, Chapter 2, Recommendation 80, p. 44.

<sup>3</sup> These figures exclude pharmacists in the Armed Services or working in hospitals.

<sup>4</sup> Ross, T. M., *op. cit.*, Chapter 4.

<sup>5</sup> See Volume I, Chapter 2, Recommendations 61-63, pp. 41 and 42.

<sup>6</sup> Ross, T. M., *op. cit.*, Chapter 4.

Pharmacy Organizations

Professional organizations of pharmacists at federal and provincial levels also employ some pharmacists in administrative capacity. In 1962 there were 16 pharmacists so employed.

FUTURE REQUIREMENTS AND SUPPLY, 1966 AND 1971

An estimate of requirements for pharmacists for 1966 and 1971 in the various fields of pharmacy and the expected supply are shown in Table 2-5.

TABLE 2-5 PROJECTED REQUIREMENTS AND EXPECTED SUPPLY OF PHARMACISTS, CANADA, 1966 AND 1971

Year	Retail	Hospital	Pharmaceutical Industry	Armed Services	Government	Pharmacy Schools	Pharmacy Organizations	Total Requirements	Expected Supply	Shortage
1962	7,972	595	612	77	51	78	16	—	9,401	—
1966	8,240	900	812	93	129	106	20	10,300	9,800	500
1971	8,575	1,250	1,000	98	225	150	27	11,325	10,695	630

SOURCE: Based on ROSS, T. M., *Pharmacist Manpower in Canada*, a study prepared for the Royal Commission on Health Services, Ottawa: Queen's Printer (*in press*), and additional data.

As we have already indicated the 1962 Pharmacist Survey located 9,401 pharmacists although it is known that the actual number available exceeded that figure. We estimate that the requirements for pharmacists will increase to 10,300 by 1966 and 11,325 by 1971. If these estimated requirements were to be achieved the population-pharmacist ratios for 1966 and 1971 would be 1,970 and 1,995 respectively, as compared with 1,975 for 1962. The anticipated deterioration in the ratio between 1966 and 1971 is not serious and with the suggested functional re-organization of the practice of retail pharmacies an increased volume of pharmaceutical services will be possible.

The estimate of the number of retail pharmacists required is based on the assumption that 42 new community pharmacies would be established annually,<sup>1</sup> corresponding to the growth of population,<sup>2</sup> and they would be manned 1.6 pharmacists per pharmacy as in 1962. The projected requirements for hospital pharmacists include an increase of 300 by 1966 and an additional 350 by 1971 to meet the suggested deficiency of 350 hospital

<sup>1</sup> Ross, T. M., *op. cit.*, Chapter 4.  
<sup>2</sup> Assuming projected population with 50,000 net immigration per annum.

pharmacists in 1962 and the expected growth in hospital utilization and hospital out-patient services. As for the employment of pharmacists in the pharmaceutical industry, in view of the Commission's recommendation<sup>1</sup> that only 15 per cent of total sales should be allowable deductible expenses for promotional and detailing activities and assuming that this recommendation is implemented, the use of pharmacists as "detail men" will be reduced. Consequently, an additional 50 pharmacists per year up to 1966 and 40 per year between 1966 and 1971 should be adequate to meet the demand from this source. With the increased activities of the Federal Government in research and evaluation of pharmaceuticals, we have projected a 170 per cent increase in the employment of pharmacists in 1971 over 1962. The requirements for pharmacists in the Canadian schools of pharmacy are related to the expected enrolment and are based on the 1962 pharmacy student-staff ratio.

Against these requirements the expected supply of pharmacists is estimated at 9,800 in 1966 and 10,695 in 1971 yielding deficits of 500 and 630 respectively.<sup>2</sup> To achieve this supply the eight schools of pharmacy will have to increase their annual number of graduates by 60 per cent or from 370 to 600 between 1963 and 1971. The expansion of facilities of Canadian schools of pharmacy which began in 1958 is still continuing and should be sufficient to provide the necessary increase in student enrolment up to 1971. In view of the future needs of the Atlantic provinces an additional school of pharmacy would be required early in the 1970's. The establishment of such a school at Memorial University at the same time and as a department of the medical school we have recommended should meet this need.<sup>3</sup>

Deficits of the order indicated for the next seven years do not appear unmanageable. First, there is no doubt a number of pharmacists in 1962 did not respond to the survey undertaken for this Commission. Second, the increasing enrolment of pharmacy students in recent years, if speeded up, could meet what at present appears to be a moderate shortage of professional pharmacists. Hence the expansion of existing pharmaceutical educational facilities expected in the normal course of events, plus one additional school we recommend, should meet the needs for the foreseeable future.

## CONCLUSION

This century has witnessed rapid and significant changes in the practice of pharmacy. Changes have taken place in the location of pharmacists as

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<sup>1</sup> See Volume I, Chapter 2, Recommendation 64, p. 42.

<sup>2</sup> In calculating the expected supply of pharmacists a 3.4 per cent attrition rate is assumed as compared with a 3.2 per cent attrition rate for physicians because of the growing proportion of women in pharmacy. The source of supply is confined to graduates of Canadian schools of pharmacy.

<sup>3</sup> See Recommendation 202, p. 38.



more are employed in hospitals. the pharmaceutical industry, government and in retail pharmacies in large cities. The developments in drug therapy have resulted in changes in the education and work of pharmacists. A generation ago, about three-quarters of the drugs and chemicals used in today's drug therapy were unknown; the greater proportion of prescribed drugs were compounded in the retail pharmacy; today 90 per cent of prescribed drugs are precompounded. At the retail level, due to advances in the manufacture and prepackaging of drugs, the pharmacist spends less time in actually dispensing drugs and more on such matters as maintaining inventories, keeping abreast of developments in drug therapy, providing information to physicians and customers, and especially merchandising services. With regard to these last named services, it is noted that in 1960, prescribed drugs comprised only 25 per cent of the total sales volume of retail pharmacies.

In the light of these developments, it is difficult to project the demand for pharmacists' services over the immediate future. The growing use of prescribed drugs and the growth of population create an increased need for pharmacists. On the other hand, the fact that retail pharmacists, who make up the majority of the profession, are underutilized in their professional capacity makes the rapid growth of supply of less importance.

The problem of retail pharmacy appears to be one of more efficient utilization of professional personnel. The data at our disposal indicate that if the commercial and non-professional activities of retail pharmacists could be delegated to less qualified personnel, they themselves could handle a larger volume of prescriptions. However, in small communities it is these commercial and non-professional activities which provide the retail pharmacist with the necessary income to continue to operate. Without these supplementary sources of income, small communities would be without the services of a pharmacist. However, with the introduction of the Prescription Drug Services Programme that we recommend, the volume of prescribed drugs dispensed by pharmacists would increase, thereby making it less necessary for them to rely as much on their non-professional activities in the future as they did in the past. The more intensive use of professional retail pharmacists would also reduce the need for additional pharmacists to meet the demands of the programme. There is, of course, a shortage of pharmacists in the area of hospital pharmacy but we feel that this shortage could be alleviated to some extent by the part-time employment of retail pharmacists by small hospitals located in rural communities.

The eight schools of pharmacy in Canada are almost the exclusive source of this nation's pharmacist manpower. As studies undertaken by the Commission show, when present programmes for expansion are complete, educational facilities will have increased by 50 per cent compared with those of 1958. This expansion will provide the increased supply of pharmacists

that will be needed in the immediate future although an additional pharmacy school will likely be required in the Atlantic Provinces early in the 1970's.

There is one area where shortages are very evident and this is the area of teaching and research. This shortage will become more marked as pharmaceutical research is stimulated by the universities and the Health Sciences Research Council. Special financial assistance will be required to expand post-graduate studies in pharmacy if this shortage is to be eliminated.

*The Commission recommends:*

201. That small hospitals, particularly in communities which find it difficult to employ a full-time pharmacist, employ a part-time pharmacist to serve selected neighbouring hospitals jointly or to combine retail pharmacy with hospital employment.
202. That, in view of the shortage of qualified pharmacists in the Atlantic Provinces, there be established a school of pharmacy at Memorial University, St. John's, Newfoundland, at the same time as the medical school we have recommended and as a department thereof.<sup>1</sup>
203. That annual Professional Training Grants of \$2,000 each be made available to graduate pharmacists pursuing post-graduate studies in pharmacy.

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<sup>1</sup> See Volume I, Chapter 2, Recommendation 141, p. 71.

## Selected Professional, Technical and Other Health Personnel

### INTRODUCTION

In addition to the well established, organized, and recognized traditional health professions—such as physicians, dentists, nurses and pharmacists—scientific and technological specialization has given rise to an increasing number of professional, technical and other occupations in the health field.<sup>1</sup> Typically, these occupations become identified only gradually as formal education and training replace and supplement the experience gained by working in a certain field. As formal training gains wider acceptance professional associations emerge which, in addition to promoting the interests of their members, usually establish and endeavour to maintain standards of qualifications.

Because of the wide range of training and education and because of their varied relations with the medical profession it is difficult to provide a generic term for these occupations. Consequently, we have classified them into three groups:

- (1) paramedical personnel numbering about two dozen occupations which assist the physician in the performance of his functions;
- (2) other health personnel consisting of optometrists, opticians, and podiatrists; and
- (3) drugless practitioners including chiropractors, naturopaths, and osteopaths.

Each of these groups is discussed below. We conclude with some comments on special problems, the use of professional titles, hazards of radiography, and ambulance services.

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<sup>1</sup> For a discussion of physicians, dentists, nurses, pharmacists, nursing aides, ward aides, homemakers, dental auxiliaries, *see* Volume I, Chapters 7 and 13, and Chapter 2 of this volume.

## PARAMEDICAL PERSONNEL

Among the occupations that have been described as part of the paramedical group are:

- Psychologists—Clinical
- Dietitians
- Medical Librarians
- Medical Record Librarians
- Public Health Inspectors
- Sanitary Engineers
- Medical Technicians—Laboratory
  - Radiological
  - Operating Room
  - Electroencephalography
  - Electrocardiography
  - Orthoptists
  - Prosthetists and Orthotists
- Therapists—Physio
  - Occupational
  - Speech and Audiological
- Medical—Artists
  - Illustrators
  - Photographers
- Medical Social Workers

Because of limitations of data we have limited our examination to the following: dietitians; medical record librarians; laboratory, radiological, operating room, electroencephalography and electrocardiography technicians; physiotherapists, occupational, and speech and audiological therapists; and medical social workers.

The rapid increase in the use of paramedical personnel in Canada can be attributed largely to two factors. First, this type of personnel plays a vital supporting role to the physician, and the increasing complexity of modern medicine demands team-work by many specialists some of whom may have skills that the physician may not himself possess. Second, the shortage of medical manpower relative to the rapid growth in demand for health services has accelerated the transfer of some tasks which require less education and training from this group to other occupations.

Two special aspects of the work of these personnel deserve mention, namely, the nature of the work itself and the place where the work is performed. Paramedical personnel all depend upon the physician for initiation of instructions which call their special skills into play and are all responsible to and supervised by the medical practitioner whom they assist in the pro-



vision of health care. However, the degree of supervision varies among the groups referred to here. Some, for example, laboratory and radiological technicians work under the immediate and close supervision of the physician, while others, including dietitians and medical social workers, have a relatively independent status.

Most paramedical personnel are employed in medium or large hospitals because the complex equipment and laboratories required by the modern methods of diagnosis and treatment are located in these hospitals. Outside the hospital, specialists rely to a larger extent than general practitioners on the services of paramedical personnel, and specialists in group practice employ relatively more paramedical personnel than those in solo practice.<sup>1</sup> The recent trend towards specialty group practice among physicians has resulted in an increase in the number of paramedical personnel employed outside the hospital. Some of the paramedical groups are also employed out of hospital in rehabilitation centres and home care services.

The quality of care which this type of personnel can provide is directly related to their education and training. Hence the importance of educational standards and institutions. In general, the education and training of this type of personnel in Canada have been upgraded in the post-war period and today compare favourably with the best provided in any industrialized country. The national societies of these occupations and the Canadian Medical Association, which jointly determine educational standards, have worked consistently to improve the quality of education and training. However, if educational and training standards are to be maintained at their high level in the future, they will have to be periodically evaluated in the light of improved medical and scientific knowledge and techniques, particularly with regard to the location of training facilities.

Traditionally these categories of personnel have been trained in universities and hospitals. Some of the university-trained personnel, such as physiotherapists, are trained to the diploma or certificate level while others, including dietitians and medical social workers, are trained to the baccalaureate or post-graduate level. To qualify for practice some university-trained personnel are required to complete a stipulated hospital internship. Other groups, like medical record librarians and medical technicians, receive their training in large hospitals. Recently, because of shortages of qualified personnel to conduct training programmes in all hospitals and with the growth of technical institutes, there has been a shift in the didactic part of training programmes from individual hospitals to regional hospitals or to vocational and technical institutes. These institutions likely will play an increasing role in the future training of some occupations which are presently hospital-trained.

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<sup>1</sup> Judek, S., *Medical Manpower in Canada*, a study prepared for the Royal Commission on Health Services, Chapter 6, Ottawa: Queen's Printer (*in press*).

In view of the increasing variety of these personnel employed by hospitals and because of our recommendations encouraging the development of medical group practice<sup>1</sup> and home care programmes,<sup>2</sup> that will lead to their increased employment outside of hospitals, we are concerned with their number, their educational qualifications and place of employment. Consequently for each of the selected occupations we will examine the trends in their numbers and distribution, assess the adequacy of educational staff and facilities, and where necessary provide estimates of future personnel requirements.

### *Employment of Selected Health Personnel, 1953 and 1961*

The occupations discussed here include most of the major paramedical occupations. Even here, however, there is a scarcity of statistics. Only one publication, *Hospital Statistics*,<sup>3</sup> provides annual data on these personnel. Some additional data have been provided by the national societies of the paramedical groups considered. Within each occupation group covered, *Hospital Statistics* include only those individuals holding hospital employment. This limitation has made it necessary for us to consider the supply of personnel primarily with reference to hospitals. Since hospitals presently employ the majority of these personnel (in 1962, hospitals provided employment for between 70 to 95 per cent of the personnel in each group for which data are available) this limitation is not serious. Bearing in mind this qualification, Table 3-1 indicates the number of personnel employed in reporting hospitals between 1953 and 1961 and provides an approximation of the trends in their employment in Canada over these years.

**TABLE 3-1** PARAMEDICAL PERSONNEL AND BED CAPACITY AND PATIENT-DAYS PER PARAMEDICAL PERSONNEL IN REPORTING HOSPITALS, BY TYPE OF HOSPITAL, CANADA, 1953 AND 1961

Type of Occupation	1953			1961		
	Number of Personnel	Bed Capacity per Personnel	Patient-Days per Personnel	Number of Personnel	Bed Capacity per Personnel	Patient-Days per Personnel
	Public General and Allied Special					
Dietitians.....	965	73	19.2	772	125	38.0
Medical Record Librarians	634	111	29.3	737	131	39.8
Laboratory Technicians....	1,774	40	10.5	4,098	24	7.2
Radiological Technicians...	1,218	58	15.2	2,613	37	11.2
Physiotherapists.....	287	245	64.6	747	129	39.2
Occupational Therapists....	67	1,048	276.9	143	675	204.9
Social Workers.....	197	356	94.2	291	332	100.7

<sup>1</sup> See Volume I, Chapter 2, Recommendations 34 and 35, p. 34.

<sup>2</sup> *Ibid.*, Recommendations 116-123, pp. 61 and 62.

<sup>3</sup> Dominion Bureau of Statistics, annual reports.

TABLE 3-1—Concluded

Type of Occupation	1953			1961		
	Number of Personnel	Bed Capacity per Personnel	Patient-Days per Personnel	Number of Personnel	Bed Capacity per Personnel	Patient-Days per Personnel
Private						
Dietitians.....	18	160	44.1	9	404	117.7
Medical Record Librarians.....	4	720	198.3	16	227	66.2
Laboratory Technicians.....	9	320	88.1	35	104	30.3
Radiological Technicians..	9	320	88.1	26	140	40.7
Physiotherapists.....	7	412	113.3	12	303	88.3
Occupational Therapists....	1	2,881	793.1	1	3,637	1,059.2
Social Workers.....	13	222	61.0	3	1,212	353.1
Federal						
Dietitians.....	—	—	—	93	108	29.1
Medical Record Librarians.....	—	—	—	22	458	123.0
Laboratory Technicians.....	—	—	—	240	42	11.3
Radiological Technicians..	—	—	—	123	82	22.0
Physiotherapists.....	—	—	—	5	168	45.1
Occupational Therapists....	—	—	—	60	234	62.9
Social Workers.....	—	—	—	43	234	62.9
Mental						
Dietitians.....	59	870	376.9	72	973	355.4
Medical Record Librarians.....	—	—	—	—	—	—
Laboratory Technicians.....	93	552	239.1	136	515	188.2
Radiological Technicians..	49	1,047	453.9	73	960	350.5
Physiotherapists.....	—	—	—	21	3,336	1,218.5
Occupational Therapists....	230	223	96.7	372	188	68.8
Social Workers.....	78	658	285.1	234	299	109.4
Tuberculosis						
Dietitians.....	63	272	92.5	42	268	70.5
Medical Record Librarians.....	—	—	—	—	—	—
Laboratory Technicians.....	162	105	36.0	157	72	18.9
Radiological Technicians..	120	143	48.6	107	105	27.7
Physiotherapists.....	—	—	—	—	—	—
Occupational Therapists....	—	—	—	—	—	—
Social Workers.....	37	463	157.5	24	468	123.4
Total						
Dietitians.....	1,105	128	42.9	988	194	62.4
Medical Record Librarians.....	638	114	30.3	775	142	42.7
Laboratory Technicians.....	2,038	69	23.3	4,666	41	13.2
Radiological Technicians..	1,396	101	34.0	2,942	65	20.9
Physiotherapists.....	294	249	65.8	840	215	69.8
Occupational Therapists....	298	418	139.5	559	322	104.9
Social Workers.....	325	436	145.9	595	322	103.6

SOURCE: Dominion Bureau of Statistics, Health and Welfare Division, calculated from *Hospital Statistics, 1953*, Ottawa: Queen's Printer 1955, and *Hospital Statistics, 1961*, Ottawa: Queen's Printer, 1964.



The rapid increase in the use of paramedical personnel in hospitals in recent years is clearly shown in Table 3-1. Between 1953 and 1961 these selected paramedical occupations increased in number from 6,094 to 11,648, or by 91 per cent. Bed capacity and patient-days of the reporting hospitals increased by only 24 and 20 per cent respectively during the same period.<sup>1</sup> The increased employment of this type of personnel is to a substantial extent the consequence of the improved quality of health care Canadians now receive.

The selected groups taken individually show marked variations in their rate of increase during the period. Some, like medical technicians and physiotherapists, increased at an explosive rate; others, like medical record librarians and medical social workers, increased less rapidly, and one group, dietitians, actually decreased. However, all groups except dietitians and medical record librarians have increased at a more rapid rate than hospital-bed capacity and patient-days. Thus in Table 3-1, all groups except these two show a reduced ratio of bed capacity and patient-days per personnel between 1953 and 1961. In the case of physiotherapists, Table 3-1 indicates that although there was an improvement in the ratio of personnel to bed capacity, the ratio of personnel to patient-days deteriorated. The explanation for this lies partly in the fact that mental hospitals were excluded in 1953 because of data limitations but included in 1961, and the ratio reflects the inadequate volume of physiotherapy care provided in mental hospitals.

There is a wide disparity in the quality of care provided by different types of hospitals in Canada. This was stressed in Volume I and recommendations were made to remedy the situation.<sup>2</sup> Table 3-1 shows that public and federal hospitals are the best staffed with respect to personnel, and mental hospitals the most inadequately staffed. Mental hospitals, for five of the seven groups, had considerably higher bed capacity and patient-days per personnel than the average for all types of hospitals. Private hospitals serve primarily chronically ill and do not employ paramedical personnel to the same extent as do other types of hospitals.

Small hospitals provide each patient with fewer services than large hospitals. This applies particularly to the services rendered by paramedical personnel. Table 3-2 shows that in all but two of the paramedical groups listed there is a direct relationship between the intensity of service, as judged by patient-days per personnel, and the size of hospital. Medical record

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<sup>1</sup> Bed capacity and patient-days are both measures of available hospital facilities. The slower rate of increase in the latter is evidence that the expansion of hospital facilities during the period has brought the demand for hospital care and supply of adequate hospital facilities into better balance. See Volume I, Chapter 8, p. 300.

<sup>2</sup> *Ibid.*, Chapter 2, pp. 51-58, and Chapter 8.



**TABLE 3-2 RATIOS OF BED CAPACITY AND PATIENT-DAYS PER PARAMEDICAL PERSONNEL  
IN PUBLIC GENERAL HOSPITALS, BY SIZE OF HOSPITAL, CANADA, 1961**

Type of Occupation	Bed Size						Total	
	1-99		100-499		500+		Bed Capacity	Patient-Days ('000)
	Bed Capacity	Patient-Days ('000)	Bed Capacity	Patient-Days ('000)	Bed Capacity	Patient-Days ('000)		
Dietitians.....	245	69.6	119	36.0	88	27.2	120	36.2
Medical Record Librarians.....	97	27.5	112	33.9	210	65.3	124	37.4
Technicians:								
Laboratory.....	56	15.8	21	6.3	15	4.8	22	6.5
Radiological.....	57	16.2	32	9.8	28	8.6	34	10.2
Combined Laboratory and Radiological.....	82	23.4	1,548	467.8	4,988	1,553.0	322	97.0
Physiotherapists.....	508	144.7	149	45.1	88	27.2	143	42.9
Occupational Therapists.....	19,325	5,500.0	1,492	451.0	396	123.3	935	281.5
Social Workers.....	3,221	916.7	516	155.9	147	45.7	335	100.8

SOURCE: Dominion Bureau of Statistics, *Hospital Statistics, 1961*, Ottawa: Queen's Printer, 1964.

librarians and combined radiological and laboratory technicians are the two exceptions.<sup>1</sup>

Two other aspects in the supply of these personnel merit examination; namely, trends in the supply of fully qualified and part-time personnel. Table 3-3 provides these data by occupation-group for public hospitals in 1953 and 1961. During this period there has been an increase in the proportion of qualified personnel in these occupations employed in hospitals, indicating a general upgrading in the quality of hospital staff. Despite this, there are still substantial numbers who are not fully qualified, especially in the predominantly hospital-trained occupations such as medical record librarians, laboratory and radiological technicians. While a high proportion of non-professionals may reflect a shortage of trained personnel, it may also indicate an efficient allocation of tasks between professionals and non-professionals in the interest of minimizing the cost of operation.

Part-time employment of paramedical personnel is important because the majority of them are female. Many married women while unable to work full time may desire part-time employment. The availability of part-time jobs will therefore ensure a more complete utilization of our potential paramedical work-force. Between 1953 and 1961 there was some decline in the over-all proportion of part-time persons in all these occupations taken together, namely from 9.7 to 7.0 per cent. However, most of this decline was accounted for by the drop in part-time radiological technicians from 12.7 to 3.6 per cent. In several occupations, e.g., dietitians, occupational therapists and medical social workers, the percentage employed part time has actually increased. Moreover, taking all groups together, the number of part-time staff has increased from 500 to 659 during the period.

In general, there has been a rapid increase in the number of this type of health personnel employed in hospitals. The occupations for which training is provided in hospitals have experienced the most rapid rate of increase, and for laboratory and radiological technicians the number of professionally qualified persons employed also has risen rapidly. The university-trained groups generally have experienced only modest increases in supply.

Despite the increase in number the supply of paramedical personnel has not yet caught up with the demand for them. Evidence of this is provided by Table 3-4 which shows existing job vacancies and vacancy rates by occupation groups in general and allied special hospitals in 1961. Admittedly, vacancy rates are at best an imprecise measure of unmet requirements. These data suggest that while the gap between demand and supply of personnel

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<sup>1</sup> Large hospitals probably employ more advanced record techniques which increase the productivity of record librarians. Combined radiological and laboratory technicians may be better suited to work in small rather than large hospitals.

has almost disappeared in the case of technicians, shortages in the supply of therapists, dietitians and medical social workers still prevail.

A high attrition rate is a prime determinant of the present shortages in this field. Although large numbers of persons are trained, this attrition rate is due to the fact that the paramedical personnel are predominantly female. Like teaching, nursing and other predominantly female occupations,

**TABLE 3-3** SELECTED PROFESSIONALLY QUALIFIED AND NON-QUALIFIED PERSONNEL AND PERCENTAGE EMPLOYED PART-TIME IN PUBLIC HOSPITALS, CANADA, 1953 AND 1961

Type of Occupation	1953		1961		Change	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
<i>Dietitians</i> .....	965		772		-193	-20.0
Professionally Qualified.....	496	51.4	563	72.9	67	13.5
Other.....	469	48.6	209	27.1	-260	-55.4
Number and Per Cent Part-time..	57	5.9	87	11.3		
<i>Medical Record Librarians</i> .....	634		737		103	16.2
Professionally Qualified.....	151	23.8	426	57.8	275	182.0
Other.....	483	76.2	311	42.2	-172	-35.6
Number and Per Cent Part-time..	69	10.9	65	8.8		
<i>Laboratory Technicians</i> .....	1,774		4,098		2,324	131.0
Professionally Qualified.....	988	55.7	2,401	58.6	1,413	143.0
Other.....	786	44.3	1,697	41.4	911	115.9
Number and Per Cent Part-time..	164	9.2	242	5.9		
<i>Radiological Technicians</i> .....	1,218		2,613		1,395	114.5
Professionally Qualified.....	579	47.5	1,453	55.6	874	150.9
Other.....	639	52.5	1,160	44.4	521	81.5
Number and Per Cent Part-time..	155	12.7	95	3.6		
<i>Physiotherapists</i> .....	287		747		460	160.3
Professionally Qualified.....	n.a.	—	667	89.3	—	—
Other.....	n.a.	—	80	10.7	—	—
Number and Per Cent Part-time..	38	13.2	104	13.9		
<i>Occupational Therapists</i> .....	67		143		76	113.4
Professionally Qualified.....	n.a.	—	108	75.5	—	—
Other.....	n.a.	—	35	24.5	—	—
Number and Per Cent Part-time..	5	7.5	21	14.7		
<i>Social Workers</i> .....	197		291		94	47.7
Professionally Qualified.....	128	65.0	227	78.0	99	77.3
Other.....	69	35.0	64	22.0	-5	-7.2
Number and Per Cent Part-time..	12	6.1	45	15.5		

SOURCE: Dominion Bureau of Statistics, *Hospital Statistics, 1953*, Ottawa: Queen's Printer, 1955, and *Hospital Statistics, 1961*, Ottawa: Queen's Printer, 1964.

paramedical groups have a very high attrition rate due to the tendency for women to retire from labour force either permanently or for a number of years after marriage.

**TABLE 3-4 VACANCY RATES FOR FULL-TIME SELECTED PROFESSIONAL AND TECHNICAL STAFF IN GENERAL AND ALLIED SPECIAL HOSPITALS, CANADA, 1961\***

Type of Occupation	Positions Established	Number Employed	Vacancies	Vacancy Rates†
Dietitians.....	972	827	145	14.9
Medical Record Librarians.....	803	739	64	8.0
Laboratory Technicians.....	4,492	4,246	246	5.5
Radiological Technicians.....	2,760	2,712	48	1.7
Physiotherapists.....	895	764	131	14.6
Occupational Therapists.....	231	176	55	23.8
Social Workers.....	366	315	51	13.9

\*Include public, private and federal hospitals, two part-time persons were taken as equivalent to one full-time worker.

†Vacancy rate is the percentage of vacancies to positions established.

SOURCE: Data supplied by Dominion Bureau of Statistics, Health and Welfare Division.

In order to see what the present situation is in the education and use of paramedical personnel we have examined, in more detail, the major paramedical groups in terms of their present functions, educational requirements, supply and shortages. These details are presented below.

### *Dietitians*

The main work of dietitians consists in the organization, administration and supervision of food services in communal and commercial establishments. Traditionally, dietitians have been employed in hospitals, schools, corrective institutions, the Armed Services and similar institutions but there has been a growing tendency for them to be employed in commercial enterprises. In the hospital the dietitian is responsible for general food service and for therapeutic diets for patients as well as food supply for the hospital medical staff, nurses, and others. The hospital dietitian may also perform a teaching function in the hospital schools of nursing or a research function as a member of a metabolic research team.

In Canada the professionally qualified dietitian is considered to be one who has the qualifications necessary for membership in the Canadian Dietetic Association. Membership requires a baccalaureate degree in Home Economics and completion of either a 10- to 12-month dietetic internship in an approved hospital or three years attested experience. Possession of a



Master's degree in Food and Nutrition also assures eligibility for membership. At present there are 16 universities in Canada offering accredited courses in Home Economics. The hospitals providing internship training are dispersed throughout most of the provinces. Manitoba, New Brunswick, Prince Edward Island and Newfoundland, however, have no hospitals with facilities for training dietetic interns.

At the sub-professional level in the dietary occupation come the certified "dietary aides" such as food supervisors and dietary assistants. To qualify for these positions one must successfully complete a programme of studies offered at vocational schools or arranged jointly by the provincial hospital and dietetic associations. At a third level in the dietary service come the non-certified "dietary aides". On-the-job training in hospitals over a stipulated period qualifies one for these positions, with the stipulated period varying between 6 and 18 months.

Although the number of dietitians employed in hospitals has declined the number of professionally qualified dietitians has increased. In 1961 there were 988 dietitians employed in hospitals as compared with 1,105 in 1953. Data on the distribution of dietitians by professional qualifications are limited to public hospitals. In these hospitals, between 1953 and 1961, the number of professionally qualified dietitians employed increased from 496 to 552, while the number of all dietitians (irrespective of qualification) decreased from 965 to 772. As a result, about seven out of every ten dietitians employed in public hospitals were professionally qualified in 1961 as compared with five out of ten in 1953. Since these hospitals employ about 80 per cent of all dietitians working in hospitals, Canadian hospitals increasingly are using professionally qualified dietitians and reducing their employment of the non-professionally qualified.

During the period, the increased volume of hospital care as measured by patient-days and the reduced number of dietitians employed would suggest shortages in the supply of dietitians. In view of the increased supply of professionally qualified dietitians and the recent tendency for hospitals to contract out to commercial caterers a share of the food preparation previously done within the hospital kitchen, an increase in patient-days per dietitian provides an inadequate measure of shortage of personnel.

The Canadian Dietetic Association has suggested a standard of dietary service of one professionally qualified dietitian per 100 rated beds. Assuming that the volume of service in hospitals of size 100 beds is too small to warrant the full-time employment of a professionally qualified dietitian, the need for these personnel in hospitals of 100 beds and over may be determined by applying this standard to total bed capacity in these hospitals. On this basis approximately 670 professionally qualified dietitians were needed in public hospitals in 1961 as compared with 552 actually employed. The number of reported vacancies also provides an indication of shortages. In 1961 there

were 145 full-time vacancies (15 per cent) for dietitians in public, federal and private hospitals. Thus, dietitians had the second highest vacancy rate of all the groups studied.

Despite the existing shortage of these personnel no expansion of training facilities need be contemplated at present because university courses in home economics and facilities for training dietetic interns in hospitals are presently under-utilized. Inadequate salaries are a factor affecting the inability of hospitals to attract and hold professionally qualified dietitians.<sup>1</sup> To attract dietitians, salaries offered by hospitals must be made commensurate with those paid by other enterprises and to other hospital professionals with similar academic background and responsibilities. Hospitals also face the problem of retaining the services of the dietitians that they employ. Many married women withdraw from employment when home responsibilities conflict with their professional duties. It is possible that higher salaries and better working conditions and hours of work will induce many married dietitians to return to hospital work.

Another approach to the solution of the existing shortage of professionally qualified dietitians may be that training programmes for certified "dietary aides", who require a shorter training period than the professionally qualified dietitian, should be expanded. The increased use of these auxiliary dietary workers, once they receive adequate supervision, will increase the productivity of the professional dietitian.

There also exists the problem of ensuring that the dietary service in smaller hospitals is at a satisfactory level. Because of the small number of patients the employment of a professionally qualified dietitian in such hospitals is not economically warranted. A practical solution to the problem of maintaining quality diet at economic cost in these small hospitals could come through the regional organization of health services in which one professionally qualified dietitian, with the assistance of certified auxiliary dietary workers, e.g., food supervisors, would serve a group of these small hospitals.

### *Medical Record Librarians*

The medical record librarian, working in hospitals and clinics, is responsible for the patient's records which show the course of his illness and treatment. More specifically, her duties include the following: "(a) reviewing patients' records for completeness and accuracy; (b) coding and indexing of diseases, operations and special treatments according to recognized classification systems; (c) assisting the medical staff in research involving medical records; (d) selecting and tabulating record information for specific

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<sup>1</sup> *The Ontario Dietetic Association*, brief submitted to the Royal Commission on Health Services, Toronto, May 1962, p. 3, and Manitoba Hospital Survey Board, *Report on Hospital Personnel*, Winnipeg: Queen's Printer, 1963, p. 173.

purposes of the hospital, the clinic, or health authorities; (e) abstracting case histories for special reports; (f) preparing periodic narrative and statistical presentations on the utilization of the hospital or clinic; (g) answering inquiries for record information in accordance with prescribed policies; (h) representing the hospital or clinic in court or other medico-legal activities; and (i) serving on the hospital's medical record committee".<sup>1</sup>

Formal training and qualifications are becoming more important for this occupation. In Canada, a qualified medical record librarian must be registered with the Canadian Association of Medical Record Librarians. To be eligible for membership the applicant must successfully complete a training programme at an approved school. In 1961, there were 11 hospital schools providing courses of training approved by the Canadian Association of Medical Record Librarians. These courses were of 12-month duration. Admission requirements to these courses include completion of senior matriculation, and a knowledge of shorthand and typing. In addition to the hospital training programmes the Canadian Hospital Association, in co-operation with the Canadian Association of Medical Record Librarians, offers an 8-month extension course which provides training to non-qualified personnel in the medical record departments of small hospitals.

The number of qualified and non-qualified medical record librarians employed in public general and allied hospitals and private hospitals in 1961 was 753, an increase of 18 per cent between 1953 and 1961. During this period the number of professionally qualified librarians rose much more rapidly. Thus, in public hospitals which employ the bulk of these personnel working in hospitals, registered librarians increased in number from 151 to 426, or 182 per cent. In these hospitals registered persons comprised almost 60 per cent of all medical record librarians in 1961, as compared with less than 25 percent in 1953.

Despite the increased employment of these personnel in recent years, the Canadian Association of Medical Record Librarians reported shortages of professionally qualified librarians in 1961. The Association suggests that general hospitals should have one registered record librarian per 100 beds.<sup>2</sup> If this standard is applied to public hospitals with 100 beds or more it appears that in 1961 these hospitals needed an additional 244 registered record librarians. Since there is some substitution between non-qualified and qualified record librarians, existing shortages are probably somewhat lower than the level suggested by these data. In 1961, public, private and federal hospitals reported 64 full-time vacancies for these personnel, but this figure underestimates the shortage of record librarians in that year. The low attrition rate of this profession, resulting from the fact that about one-third of its

<sup>1</sup> Manitoba Hospital Survey Board, *op. cit.*, p. 182.

<sup>2</sup> Canadian Association of Medical Record Librarians, brief submitted to the Royal Commission on Health Services, Toronto, May 25, 1962, p. 2.



members belong to religious orders, helped to prevent more serious shortages from arising.

We conclude therefore that moderate shortages of these personnel exist. However, the increased use of medical records to maintain high quality health care and the increased volume of health services that will result from the recommended Health Services Programmes will necessitate a significant rise in the volume of medical records, and consequently in the demand by hospitals for these personnel. On the other hand, the wide-spread introduction of new methods of collecting, coding and classifying these records would tend to reduce the demand for them. It is unlikely, however, that automation will significantly affect the demand for these personnel for the foreseeable future. Existing training facilities are adequate to handle the expansion of enrolment that must take place if present shortages are to be removed and future requirements met. The continued extension of financial assistance under the National Health Grants, Technical and Vocational Training Programmes, and the Hospital Insurance Programme will help to stimulate the required expansion in enrolment.

The employment of full-time registered librarians is appropriate only in those hospitals with relatively large and complex care programmes. Therefore, medical record work in smaller hospitals will continue to be carried out by nurses or clerical personnel. However, a system under which a registered record librarian supervises the records in a group of these small hospitals, on a regional basis, would ensure that the quality of record services in rural areas is of an adequate standard.

### *Medical Technicians*

#### LABORATORY TECHNICIANS

The work of laboratory technicians encompasses all laboratory procedures that assist in the detection and control of disease and in the investigation and maintenance of the normal functions of the human body.<sup>1</sup> In Canada about four-fifths of the certified laboratory technicians work in hospitals, the remainder are employed in provincial government laboratories, universities and private laboratories.

The registering body for this paramedical group is the Canadian Society of Laboratory Technologists which after examination, grants a Certificate of Registered Technologist as the standard qualification for the practice of medical laboratory technology. Only graduates from approved training programmes in laboratory technology are eligible to take this exami-

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<sup>1</sup> Department of Labour, *Medical Laboratory Technologists*, Monograph 42, Canadian Occupation Series, Ottawa: Queen's Printer, 1957.



nation.<sup>1</sup> In 1960, there were 119 centres in Canada which were approved for the training of laboratory technicians. These centres were of four types: approved hospital laboratories, provincial government laboratories, regional centralized laboratories, and colleges and universities.

Training programmes in approved hospital laboratories are under the direction of a certified pathologist and are of 12 to 24 months duration. Instruction in the theoretical and practical aspects of medical technology is provided by the technical staff. Training at provincial government laboratories is divided in two phases: 6 to 8 months of theoretical training and followed by one year of practical training in an approved hospital laboratory. Under the centralized training programme approved hospital laboratories co-ordinate the didactic phase of their training in one centre; students then return to their respective hospitals for an additional year of practical experience. All existing university courses in medical technology have the approval of the Canadian Medical Association. The universities of Saskatchewan and Alberta offer a three-year degree course in medical technology; the other universities offer two-year diploma courses.

The supply of laboratory technicians has increased at a rapid rate in recent years. Between 1953 and 1961 the number of laboratory technicians employed in all reporting hospitals, excluding federal, increased from 2,038 to 4,426, or by nearly 120 per cent. In addition to this rapid growth in numbers, one other aspect of the supply of this group deserves specific mention—that is the sharp rise in the employment of qualified technicians. During the period under review, public hospitals employed an additional 1,413 qualified laboratory technicians, and as a consequence, the qualified technicians comprised 58.6 per cent of all laboratory technicians working in these hospitals in 1961 as against 55.7 per cent in 1953. In recent years there has been a sharp increase in the productivity of this type of personnel. It has been estimated that there was a 12 per cent annual increase in the volume of laboratory units per technician over the period.<sup>2</sup>

Despite the marked increase in the supply of these personnel there is some evidence that shortages still existed in 1961 but it is not believed that these shortages were serious. For example, in 1961 only 246 of the 4,492 positions established were unfilled, a vacancy rate of 5.5 per cent which is the second lowest of the groups studied. We conclude, therefore, that there is no significant shortage of this paramedical group.

Since the co-ordination and concentration of the didactic phase of training permits a more efficient utilization of training personnel and ensures

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<sup>1</sup> Training programmes are approved by the Canadian Medical Association Committee on approval of Hospital Laboratories for Training Medical Technologists.

<sup>2</sup> Boyd, A. D., *Paramedical Manpower in Canada*, a study prepared for the Royal Commission on Health Services, Ottawa: Queen's Printer (*in press*).

a higher quality of training, the expansion of centralized training programmes should be stimulated. Before this can be done, in view of the present shortage of qualified instructors, some expansion of advanced training programmes must be undertaken. Some approved hospitals have already inaugurated courses for advanced certification but the number of advanced courses appears inadequate. Universities, especially, should consider the establishment of advanced courses in medical technology.

If the supply of this type of personnel is to be maintained we must be concerned with their high attrition rate. The Canadian Society of Laboratory Technologists estimates that about 90 per cent of the laboratory technicians are females who seldom remain in the profession more than 2 or 3 years.<sup>1</sup> Salary increases might tend to attract more males to the profession. Moreover, an increased number of professionally qualified males would assure stability in the senior laboratory technician positions and ensure that experienced personnel are always available to train students. Improved working conditions and better working hours might reduce the withdrawal rate for females and attract married women to work on a part-time basis.

Many small hospitals in rural areas have no laboratory technicians on their staff although some such hospitals combine laboratory and radiological work. In 1961 about 70 per cent of the hospitals of under 100 beds did not employ a qualified laboratory technician. This does not suggest that the required laboratory services were not performed but that they were not performed intramurally. Smaller hospitals have their laboratory procedures performed in larger hospitals or provincial laboratories. In view of the low volume of their laboratory needs many small hospitals find it more economical to have their laboratory work done extramurally. Consequently, it appears that no change in the existing arrangement is necessary.

#### RADIOLOGICAL TECHNICIANS

This paramedical group is concerned with the technical aspects and use of ionizing radiation in medicine under the direction of a physician. Most of the radiological technicians are engaged in the diagnostic and some in the therapeutic field of radiology, while only a few work in both fields. The majority of these technicians work in hospitals but others are employed in the offices of radiologists, dentists, and group practice clinics, as well as in laboratories serving the health professions.

Most of the approved centres for the training of these personnel are in hospitals, but some universities and vocational schools and technical institutes have also been designated as teaching centres.<sup>2</sup> Minimum educa-

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<sup>1</sup> *Canadian Society of Laboratory Technologists*, brief submitted to the Royal Commission on Health Services, Toronto, May 31, 1962, p. 9.

<sup>2</sup> The six university centres offering training for radiological technicians are located in Saskatchewan, Ontario, Quebec and Nova Scotia.

tional qualification for entrance into approved schools is junior matriculation, or university entrance requirements for training in the university centre for radiological technicians. The duration of training in approved schools is not less than 24 months for diagnostic or therapeutic techniques and 36 months for both fields combined.

The Canadian Society of Radiological Technicians is the only certifying body for radiological technicians in Canada. Certification examinations in both diagnostic and therapeutic techniques are held twice annually. Successful candidates are granted certificates and are entitled to the qualification of Registered Radiological Technician. At present graduates of both approved and non-approved training centres are eligible to sit for the certification examinations, but after May 1966 only graduates of approved training centres will be permitted to do so.

There has been a significant rise in the employment of radiological technicians in hospitals in recent years. Between 1953 and 1961 the number of these personnel employed in all hospitals, excluding federal, increased from 1,396 to 2,819, i.e., an increase of over 100 per cent. The effective increase is even greater since there was, during this period, a tendency for a larger proportion of these technicians to work on a full-time basis. In public hospitals, 96 per cent of these technicians worked on a full-time basis in 1961 as compared with 87 per cent in 1953. This group has also shown an impressive improvement in qualifications during this period. For example, in public hospitals, which employ nine-tenths of all radiological technicians working in hospitals, there were 1,453 fully qualified technicians in 1961 as compared with 579 in 1953. They comprised 56 per cent of all technicians employed in these hospitals in 1961 as against 48 per cent in 1953.

This marked improvement in the supply of these technicians between 1953 and 1961 does not imply that it was completely adequate. Available data suggest that while shortages exist they are quite moderate. In 1961 only 58 of the 2,760 full-time positions established for radiological technicians were unfilled. The resulting vacancy rate of 1.7 per cent was the lowest of all groups studied. It can be concluded therefore that there is no serious shortage in the supply in this group of personnel.

To assure an adequate supply of qualified teachers in radiological techniques some increase in the numbers of advanced and refresher courses appears desirable. Further, the reorganization of existing hospital training programmes to permit the co-ordination of the didactic phase in centralized schools would promote the more efficient use of available resources. These centralized training centres would be best established in regional hospitals, vocational schools, and institutes of technology. The expansion of advanced courses would enable technicians to qualify for senior positions and thereby increase the attractiveness of a career in radiological technology for males.



One factor affecting the supply of this group is the high attrition rate. For example, the Canadian Society of Radiological Technicians estimates that a large proportion of its present membership are graduates of less than five years experience.<sup>1</sup> To reduce the high attrition rate more males should be attracted to this occupation and an increase in salary scales will serve to achieve this objective. But improved working conditions and better working hours may tend to retain females in this occupation.

Finally there remains the problem of ensuring that the standard of radiological services in small hospitals is of an acceptable quality. Small hospitals in rural areas, which generally provide less radiological services than larger hospitals, encounter difficulty in attracting registered radiological technicians. In 1961 about two-thirds of the hospitals with less than 100 beds did not employ a registered radiological technician. A high quality of service could still be assured in these hospitals by having one qualified technician serve two or three small hospitals in adjacent communities.<sup>2</sup> Many qualified technicians are reluctant to accept employment in rural hospitals because it precludes advancement in technical skill, which, in turn, limits the opportunities for advancement into better paying positions. This may result in small hospitals in rural areas being unable to obtain the qualified personnel they require. It has been suggested that a travelling supervisory service and refresher courses, by removing the fear of obsolescence of skill, would reduce the technicians' reluctance toward rural employment.<sup>3</sup> These proposals should therefore be given serious consideration.

#### OPERATING-ROOM TECHNICIANS

Operating-room technicians work exclusively in hospitals and constitute a relatively new paramedical group as nurses have previously been used in this capacity. These technicians are not widely employed in Canada and because of their small numbers no national organization has been established. Consequently there is no accredited course of training. Two types of programmes, both offered in hospitals, are available for the training of these technicians. Some large hospitals provide basic training for their own operating-room technicians. The duration of this training is six months after two years working as an orderly. More recently, the Winnipeg General Hospital has established a six-months course designed to train such technicians to work in other hospitals. Presently, this course is limited to ten students annually.

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<sup>1</sup> *The Canadian Society of Radiological Technicians*, brief submitted to the Royal Commission on Health Services, Toronto, May 29, 1962, p. 8.

<sup>2</sup> Manitoba Hospital Survey Board, *op. cit.*, p. 142.

<sup>3</sup> *Canadian Society of Radiological Technicians, Manitoba Division*, brief submitted to the Royal Commission on Health Services, Winnipeg, January 17, 1962, p. 10.



The functions of a scrub nurse are of a specific nature and can be performed just as adequately by the operating-room technician as by the registered nurse. In view of the shortage of nursing personnel and their longer period of training, the substitution of these technicians for nurses in the operating-room will promote the more efficient allocation of our health manpower. Compared with nurses or student nurses the employment of this group reduces staff turnover. To assure that the supply of operating-room technicians is sufficient to permit this substitution the Commission recommended in Volume I that "... a new classification of this type of work be established with adequate salaries so that men may make a career of this occupation".<sup>1</sup>

#### OTHER TECHNICIANS

The growing complexity of the equipment used in the diagnosis and treatment of disease in the physicians' offices, hospitals, and laboratories has led to a corresponding demand for personnel to operate such equipment. We have described groups of technicians in fields where special knowledge and skills are required, and where specific qualifications have been identified as a prerequisite for practice. These qualifications range from formal training and certification in the case of laboratory and radiological technicians, to several months training in a hospital without the need for formal certification as in the case of operating-room technicians.

There are other areas, where the requirements for training are still less specific or uniformly accepted. Among these are the electroencephalography technicians whose training on the job ranges up to 3 to 4 years. They, like the equipment they use, are mostly employed in hospitals.

Electrocardiography technicians, on the other hand, are employed predominantly in physicians' offices or clinics. Little training is required for this type of work often performed by nurses or other personnel in the office, clinic, or hospital.

### *Therapists*

#### PHYSIOTHERAPISTS

Physiotherapy is the treatment of disease and injury by the use of heat, light, electricity, massage, therapeutic exercises and other rehabilitation procedures.<sup>2</sup> It is an accepted and valuable adjunct of modern medical and rehabilitative treatment and is used extensively in all branches of medicine including surgical (orthopaedic, neurosurgical and reconstructive), dermatological, neurological, obstetrical, gynaecological, paediatric and geriatric.

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<sup>1</sup> See Volume I, Chapter 2, Recommendation 139, p. 69.

<sup>2</sup> Manitoba Hospital Survey Board, *op. cit.*, p. 145.

The physiotherapist is employed in departments of general, special and rehabilitative hospitals, in out-patient centres, private patient clinics and in the home. Three out of every five physiotherapists in Canada are employed by hospitals, but irrespective of place of employment the physiotherapist provides treatment only under the direction of a medical practitioner.

In most provinces, physiotherapists must be licensed under a provincial act<sup>1</sup> in order to practise. The legislation requires a standard of training similar to that set by the Canadian Physiotherapy Association for its membership. Membership in the national organization is restricted to graduates of Canadian university schools of physiotherapy after completion of a five-months internship, and to foreign-trained physiotherapists who either have diplomas or degrees which are recognized by the national organization, or pass a special examination set by the Canadian Physiotherapy Association. There are now in Canada six schools providing training in physiotherapy<sup>2</sup> each within a university medical faculty. Three of these schools offer combined training in physical and occupational therapy and the remainder offer separate training in both specialties. In all six schools, a diploma in physical therapy is given on the successful completion of a two- or three-year course of study and specified internship.

Beyond the diploma level, McGill University offers a four-year degree course in both therapies combined, and the University of Toronto offers further training towards a teacher's certificate in physiotherapy. There are also refresher courses for practising therapists.

In 1961 there were 840 physiotherapists, employed in Canadian hospitals, of whom 90 per cent worked in public general and allied special hospitals. Between 1953 and 1961 the number of physiotherapists employed in public hospitals increased by 160 per cent from 287 to 747, thereby registering the greatest percentage increase of all paramedical groups studied here. Because of this rapid increase, there has been a significant improvement in the beds and patient-days-physiotherapist ratios during this period. Private hospitals have also experienced some improvement in the adequacy of their physiotherapist personnel. Approximately 14 per cent of physiotherapists in public hospitals were employed on a part-time basis.

The increase in the supply of physiotherapists between 1953 and 1961 does not mean that needs were being adequately met even in the latter year. There is much evidence to suggest that there was a serious shortage in these occupations in 1961. In that year, there was one professionally qualified physiotherapist for every 14,500 Canadians. Comparable figures for other countries were as follows: Denmark—2,200; Sweden—

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<sup>1</sup> New Brunswick, Nova Scotia, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia have such acts; licensing is mandatory in all these provinces except Alberta.

<sup>2</sup> Universities of Toronto, Montreal, Manitoba, Alberta, British Columbia and McGill.

2,600; United Kingdom—6,000; Australia—8,000; and France—12,000. The difference in population-physiotherapist ratios of the provinces (e.g., British Columbia—10,800 and Newfoundland—37,700) suggests that the supply of physiotherapists is both inadequate and unevenly distributed. In fact it has been suggested that about half of the sick and injured Canadians who need and could benefit from physiotherapy are unable to obtain this service.<sup>1</sup>

Further evidence of the existing shortage of physiotherapists is provided by the number of vacancies in hospitals. In 1961, there were 895 full-time positions for this type of personnel in all hospitals excluding mental and tuberculosis. Of these, 131 or 14.6 per cent were unfilled. This vacancy rate was the third highest of the seven paramedical groups studied, exceeded only by occupational therapists and dietitians.

The employment of trained aides will increase the volume of services which our present supply of physiotherapists provide. These aides should be trained on-the-job by senior staff physiotherapists and their work should be directly supervised by qualified personnel.

To assure an adequate supply of physiotherapists the Continuing Committee of the Canadian Conference on Physiotherapy has recommended: that seven additional schools in physiotherapy be established, each in a university with a medical faculty; that two additional schools, in universities not previously having medical faculties, be created which should offer a diploma in physiotherapy; and that these schools be established by 1971.<sup>2</sup> Since students in this field, after graduation, tend to practise in areas close to the school, we must conclude that, because of the present maldistribution of our physiotherapy manpower, the Atlantic Provinces and Quebec should have priority in any programme to provide training facilities for physiotherapy.<sup>3</sup>

The high attrition rate of this profession is an important determinant of existing shortages. It has been estimated that approximately 10 per cent of the graduates of Canadian physiotherapy schools never practise and another 65 per cent leave the profession by the fifth year after graduation.<sup>4</sup> Salary increases and better working conditions might encourage the female physiotherapist to remain in active practice. More adequate remuneration will also attract more men, whose attrition rate is lower, into these occupations.

Most small hospitals are without the services of a qualified physiotherapist. In 1961, only 2 of the 604 reporting hospitals of size 1-99 beds employed a physiotherapist. Failure to employ these personnel was due to the low volume of physiotherapist services considered essential and to an inability

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<sup>1</sup> *The Continuing Committee of the Canadian Conference on Physiotherapy*, brief submitted to the Royal Commission on Health Services, Toronto, May 24, 1962, p. 2.

<sup>2</sup> *Ibid.*, pp. 14 and 15.

<sup>3</sup> See Recommendation 209, p. 70.

<sup>4</sup> *Canadian Physiotherapy Association*, brief submitted to the Royal Commission on Health Services, Ottawa, March 1962, p. 8.



to finance the costs involved. A solution to the problems facing these small hospitals can be found through a regional approach. A travelling regional physiotherapy service under which a physiotherapist is shared among a few small hospitals is one means by which these hospitals can provide adequate physiotherapy care to their patients.

#### OCCUPATIONAL THERAPISTS

Occupational therapy is a rehabilitative procedure guided by a qualified occupational therapist who, under medical supervision, uses self-help, manual, creative, recreational and social, educational, pre-vocational and industrial activities to promote the maximum recovery of the physical and mental functions of patients. Besides treating patients, occupational therapists may also be employed in administrative and teaching positions.<sup>1</sup> In the past, these therapists were primarily engaged in treating long-stay patients in hospitals but in recent years their skills are being used more widely. Today much of their treatment is provided in community workshops, curative workshops, home-care programmes, and to short-stay patients in general hospitals. However, mental hospitals still employ about two-thirds of the occupational therapists working in hospitals. In 1961, about one-third of the active occupational therapists in Canada were employed in rehabilitative clinics and centres.

Training in occupational therapy in Canada is provided in six schools, each within a medical faculty.<sup>2</sup> Three of these schools offer a diploma in occupational therapy and the others have a combined diploma course in occupational and physical therapy. The duration of these diploma courses is two to three years plus a six-month internship. The Canadian Association of Occupational Therapy in addition offers a special 18-months diploma course at Kingston. Admission requirements to this special course are a degree in nursing, a B.A. degree or equivalent experience in this occupation.

There has been a significant increase in the supply of occupational therapists in recent years. The total number employed in public, private and mental hospitals stood at 516 in 1961 as compared with 298 in 1953. This is one paramedical occupation in which immigration has had a considerable impact on the increase in supply. For example, between 1957 and 1961 the foreign-trained share of total active membership of the national association increased from 26 to 36 per cent. As hospital-bed capacity and patient-days grew at a less rapid rate than the supply of occupational therapists between 1953 and 1961, the patient-days and bed capacity per personnel ratio for this paramedical group improved during the period. In 1961 about 85

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<sup>1</sup> In 1961, of the 342 members of the Canadian Association of Occupational Therapy, 2 were employed in administrative positions and 21 in teaching.

<sup>2</sup> Universities of Toronto, Montreal, Manitoba, Alberta, British Columbia and McGill.



per cent of the occupational therapists in public hospitals were employed on a full-time basis as compared with 92 per cent in 1953.

Despite the rapid increase in their supply serious shortages of these personnel still exist. The Rehabilitation Committee of the Canadian Medical Association has suggested a ratio of one occupational therapist per 15,000 population.<sup>1</sup> To meet this standard, 1,200 occupational therapists would have been needed in 1961. In that year membership in the national association was 342, of whom only 319 were providing treatment to patients. Further evidence of the acute shortage of these personnel is provided by the vacancy data for hospitals. General and allied special hospitals in 1961 had 231 full-time positions established for occupational therapists. Of these only 176 were filled. The resulting vacancy rate of 24 per cent was clearly the highest of all the paramedical groups studied. In mental hospitals the Canadian Association of Occupational Therapy estimated that 367 vacancies for therapists existed in these institutions in 1961. A conservative estimate would place our shortage of qualified therapists in 1961 at between 400 and 500.

This predominantly female profession has a very high attrition rate. For example, between January 1957 and December 1961, 300 additional Canadian-trained personnel were appointed in Canada but during the same period 298 resigned. An increase in male participation in this profession would, of course, reduce the attrition rate. Increases in salaries of occupational therapists may make a career in this field more attractive to males. In addition, efforts should be made to emphasize the opportunities for males in this profession through vocational guidance programmes at the secondary school level. Improved working conditions and better working hours may retain married women in this occupation.

Another method of relieving existing shortages is by training more aides to carry out the routine responsibilities and auxiliary functions of the occupational therapists. The scope of their duties includes work assigned by qualified occupational therapists, maintenance of equipment and preparation of patients for scheduled treatment.<sup>2</sup> In order to maintain the desired level of health care the work of these aides must be directed and supervised by qualified occupational therapists. Consequently, the supply of qualified therapists limits the extent to which the expansion of existing training programmes for aides can effectively compensate for the shortage of this personnel. In view of the existing shortage there must be a rapid expansion of university and clinical facilities for the training of therapists.

To assure the maintenance of desirable professional standards the Canadian Association of Occupational Therapy recommends that new occupational therapy courses be established within university medical facul-

<sup>1</sup> *The Canadian Association of Occupational Therapy*, brief submitted to the Royal Commission on Health Services, Toronto, May 23, 1962, p. B-2.

<sup>2</sup> *Ibid.*, p. 10.

ties.<sup>1</sup> One of these courses should be provided at l'Université de Sherbrooke where a medical school is now being established.<sup>2</sup> Increased financial assistance, e.g., scholarships, bursaries, and loans, would also augment the number of applicants for training.

#### SPEECH AND AUDIOLOGICAL THERAPISTS

Speech therapists are concerned with the evaluation and education of those suffering from communication disorders which affect the comprehension and expression of language. The primary objective of speech therapy is to diagnose and treat disorders of articulation, voice and language. Audiology, the study of hearing, is chiefly concerned with different methods of testing hearing and educating the person with a hearing impediment. The audiological therapist carries out the prescribed treatment for the hearing impairment. Speech and audiological therapists work in hospitals, rehabilitation centres, clinics, special schools for the handicapped or deaf, as well as in the regular school system.

Manitoba is the only province with a licensing board defining the conditions under which individuals are entitled to practise speech and hearing therapy.<sup>3</sup> There is no national organization but there are provincial associations in Quebec, Ontario, Manitoba, Saskatchewan and British Columbia.

Speech therapy and audiology are complementary skills and are taught together in Canada, so that the graduates may practise in either specialty. Three Canadian universities provide training in these areas, namely, the Universities of Montreal, Toronto and McGill.<sup>4</sup> In all three universities training for speech and audiological therapists comes under the medical faculty. Admission requirements in the schools is either a B.A. or B.Sc. degree or equivalent.<sup>5</sup> The duration of all courses is two academic years plus a six-month internship.

Because of the location of the Canadian schools in Eastern Canada, students from the western provinces usually receive their training at universities in the United States.

Statistics on speech therapists are lacking. Membership in the five provincial associations in 1961 was 129 but both speech therapists and correctionists are eligible for membership in these associations. It is estimated that there were between 100 and 125 qualified speech therapists in Canada in that year. Most of them work in hospitals. Generally, however, the hospital-

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<sup>1</sup> *Ibid.*, p. 8.

<sup>2</sup> See Recommendations 207 and 209, p. 70.

<sup>3</sup> A Bill, with the same intent, is at present before the Quebec Legislature.

<sup>4</sup> The Universities of Montreal, Toronto, and McGill began their courses in this field in 1956, 1958 and 1963 respectively. At McGill University, administratively, the School of Graduate Studies looks after students in this field.

<sup>5</sup> University of Toronto accepts registered nurses, i.e., R.N. and Teacher's Certificates, with experience as equivalent.

employed speech therapist also works part-time in a clinic or rehabilitation centre. It has been estimated that between 400 and 500 additional speech therapists are needed.<sup>1</sup>

At present existing training facilities graduate about 12 speech therapists per year; in addition, another 10 to 20 foreign-trained speech therapists annually migrate to Canada. This annual gross increment to supply is seriously inadequate in view of the shortage that exists in this country. The need for further expansion of training facilities is self-evident. Additional facilities should be established and they should be associated with the medical faculties of Dalhousie University, in one of the Prairies' medical schools and the University of British Columbia. In the latter province such a school should be associated with the Health Sciences Centre.<sup>2</sup>

### *Medical Social Workers*

Social work has gained an essential role in the provision of good health services and as the social component in sickness has become more recognized, the contribution of the medical social workers has become increasingly more significant. They are employed in hospitals, clinics and rehabilitation centres and deal with social problems of patients and their families. Among the principal tasks which medical social workers undertake are the provision of assistance to patients and their families to overcome problems which prevent them from benefiting fully from medical care available; helping patients and their families to remedy conditions contributing to illness such as housing, family attitudes, working conditions, etc.; making available community services to the patients and their families; serving as a consultant to the administration of the hospital or clinic in the formulation of policies affecting the social well-being of the patient; and, finally, assisting patients to readjust themselves after medical treatment or because of permanent disability.<sup>3</sup>

Social workers may receive their formal education in Canada at seven universities located in British Columbia, Manitoba, Ontario, Quebec and in one other institution, the Maritime School of Social Work. Entrance requirement into a school of social work is a B.A. degree; an additional year of training leads to the Certificate in Social Work; and two years of training leads to the degree of Master of Social Work.

Membership in the Canadian Association of Social Workers requires graduation from a school of social work approved by the association.

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<sup>1</sup> Estimate made by the Medical Rehabilitation and Disability Advisory Service, Department of National Health and Welfare.

<sup>2</sup> See Recommendation 208, p. 70.

<sup>3</sup> *The Canadian Association of Social Workers*, brief submitted to the Royal Commission on Health Services, Toronto, May 28, 1962, pp. 1 and 2.



While in-service courses are given by some provincial governments and private agencies, they do not qualify individuals for membership.

There has been a significant rise in the number of social workers employed in hospitals. In 1953 some 325 were employed in hospitals (excluding federal for which no data are available) and 595 in 1961, or an increase of 270 or 83 per cent. Consequently, the ratio of patient-days per social worker has improved from 145,900 to 103,600 between the two years. In public general and allied special hospitals the number of social workers rose from 197 in 1953 to 291 in 1961, or a rise of 48 per cent, while in mental hospitals the corresponding numbers were 78 and 234, or a rise of 200 per cent. There was, however, a more rapid rise in the number of professionally qualified social workers employed in public hospitals in this same period, from 128 to 227 or by 77 per cent. The fully qualified social workers accounted for 78 per cent of the total number employed in public hospitals in 1961 as compared with 65 per cent in 1953. Out of the total of 291 social workers in public hospitals in 1961 about one-sixth were working on a part-time basis.

As needs for personnel in this field vary between hospitals depending on the type of hospital, its location, and the proportion of in-patient to out-patient services, it is difficult to establish a standard by which the adequacy of our supply of medical social workers may be determined. It is evident, however, that shortages of these personnel exist. In 1961 there were 51 full-time vacancies or 14 per cent of positions established for social workers unfilled in public, federal and private hospitals. With the Commission's recommendations to establish home care and to treat more mental patients in general hospitals and in the community,<sup>1</sup> there will be a still greater need for medical social workers both to help discharged patients and to assist their families. Methods must therefore be devised of overcoming existing and future shortages of these personnel.

The expansion in the training of a less qualified type of social worker who would work under the supervision of a professionally qualified worker would contribute to a reduction in existing shortages of qualified personnel.<sup>2</sup> Measures which would increase the number of university graduates in social work, e.g., bursaries and loans, would assist materially in expanding the supply of qualified social workers in the health field.

Finally there is the problem of the provision of these services in small hospitals. In 1961 none of the 604 reporting hospitals of size 1-99 beds employed a medical social worker. While it may not be feasible for small hospitals to employ a full-time medical social worker, some system must be

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<sup>1</sup> See Volume I, Chapter 2, Recommendations 9, 18 to 20, and 116 to 123, pp. 24, 26, 61 and 62.

<sup>2</sup> Manitoba Hospital Survey Board, *op. cit.*, p. 162.



devised to ensure that the services of a qualified social worker are available to patients of these hospitals. One such arrangement is for these hospitals to employ social workers on a part-time basis. Alternatively, this service could be organized regionally with the social workers being attached to a county health unit or regional welfare office.

### *Future Requirements and Supply of Selected Paramedical Personnel*

Thus far we have discussed the functions and education of selected paramedical groups and evaluated their present supply. Where serious deficiencies exist we have indicated how they could be overcome. It remains for us finally to estimate our future requirements of paramedical personnel and to determine to what extent existing training facilities will be adequate to supply the additional personnel that we must have if our future needs are to be met.

#### HOSPITAL REQUIREMENTS

The purpose of this section is to determine requirements for full-time professional and technical staff employed in hospitals with the use of a measurable factor, such as the patient-days per person of each paramedical group, and to estimate the expected supply of such personnel until 1971. No precise estimates are possible because of many uncertainties connected with the changing role of paramedical personnel in the provision of health services and the changing pattern of organization of health services, particularly in hospitals. For example, future demand for auxiliary health personnel will depend, apart from the influence of increased population, on the extent to which hospital facilities and treatments are increased, and on the degree of growth in out-patient and home-care services which require the services of physiotherapists, occupational therapists and medical social workers.

A minimum estimate of requirements for the various paramedical groups employed in hospitals was made on the basis of the actual 1961 ratio of patient-days to person employed in each group and the projected aggregate volume of patient-days for 1966 and 1971.<sup>1</sup> A higher estimate of future requirements was based on the assumption of the improved staff-patient-days ratio, i.e., the patient-days per full-time position established in each paramedical group as of 1961. Because of the expected increase in hospital-associated out-patient and home-care services and the increased use of medical records in maintaining high quality health care, we allow in our

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<sup>1</sup> Madden, J.J., *Economics of Health*, a study prepared for the Royal Commission on Health Services, Ottawa: Queen's Printer (*in press*).

TABLE 3-5 PROJECTED REQUIREMENTS AND SUPPLY OF SELECTED FULL-TIME PROFESSIONAL AND TECHNICAL STAFF EMPLOYED IN HOSPITALS, CANADA, 1966 AND 1971\*

Occupation and Year	Number of Staff Required								Expected Supply of Qualified Personnel*	Projected Deficiencies	
	(1)				(2)					(1)	(2)
	At 1961 Staff: Patient-days Ratio				At Improved Staff: Patient-days Ratio						
	General and Allied	Mental	Tuber- culosis	Total	General and Allied	Mental	Tuber- culosis	Total			
<i>Dietitians</i>											
1961.....	827	72	42	941	—	—	—	—	—	—	—
1966.....	1,024	63	26	1,113	1,203	74	30	1,307	922	191	385
1971.....	1,200	58	17	1,275	1,410	68	20	1,498	1,162	113	336
<i>Medical Record Librarians</i>											
1961.....	739	n.a.	n.a.	739	—	—	—	—	—	—	—
1966.....	915	—	—	915	993	—	—	993	677	238	316
1971.....	1,572	—	—	1,572	1,665	—	—	1,665	927	645	738
<i>Laboratory Technicians</i>											
1961.....	4,246	136	157	4,539	—	—	—	—	—	—	—
1966.....	5,258	119	97	5,474	5,562	126	103	5,791	4,477	997	1,314
1971.....	6,161	110	66	6,337	6,518	116	70	6,704	7,555	+1,218	+ 851
<i>Radiological Technicians</i>											
1961.....	2,712	73	107	2,892	—	—	—	—	—	—	—
1966.....	3,358	64	66	3,488	3,417	65	67	3,549	2,586	831	963
1971.....	3,936	59	45	4,040	4,004	60	46	4,110	4,165	+ 125	+ 55
<i>Physiotherapists</i>											
1961.....	764	21	n.a.	785	—	—	—	—	—	—	—
1966.....	946	18	—	964	1,108	21	—	1,129	1,030	66	99
1971.....	1,608	17	—	1,625	1,798	20	—	1,818	1,415	+ 210	403

Occupational Therapists	1961.....	176	372	n.a.	548	—	—	—	—	—	—	—
	1966.....	217	326	—	543	286	430	—	—	436	107	280
	1971.....	755	301	—	1,056	835	397	—	—	1,232	576	752
Medical Social Workers	1961.....	315	234	24	573	—	—	—	—	—	—	—
	1966.....	390	205	15	610	453	238	17	708	615	5	93
	1971.....	957	189	10	1,156	1,030	220	12	1,262	880	276	382

\*Methods of estimating the expected supply of professionally qualified paramedical personnel employed in hospitals 1966 and 1971.

In all cases supply is stated in terms of full-time equivalent. Conversion into full-time equivalent was made on the assumption that in all hospitals the distribution of professionally qualified between full- and part-time employment was similar to that of the corresponding paramedical group in public hospitals in 1961. It is further assumed that two part-time equal one full-time professional.

*Dietitians and Medical Record Librarians:* The projected gross supply of each of these groups is computed by adding to the professionally qualified employed in hospitals in 1961, the gross number of professionals taking up hospital employment between 1961-1966 and 1961-1971. The latter figure is determined on the basis of the average annual gross addition of professionally qualified in hospitals over the 1956-1960 period for dietitians and 1958-1961 for medical record librarians.

*Technicians (Laboratory and Radiological) and Medical Social Workers:* Projections of the net supply of each of these groups are based on the assumption that the professionally qualified members will increase during the decade 1961-1971 at the same rate as that registered between 1953-1961 on the assumption that educational facilities will show the same rate of growth as in the last decade. Consequently, for each group, the number of professionals employed in 1961 is inflated by the respective annual average growth rate registered between 1953-1961.

*Physiotherapists:* Estimates of the supply of physiotherapists in 1966 and 1971, made by the Continuing Committee of the Canadian Conference on Physiotherapy, are used. The net supply of hospital-employed physiotherapists is determined on the assumption that the 1961 distribution of therapists between hospital and non-hospital employment will be maintained in 1966 and 1971.

*Occupational Therapists:* The projected net supply of occupational therapists is computed by adding to the professionally qualified employed in hospitals in 1961 the net number of professionals taking up hospital employment between 1961-1966 and 1961-1971. The latter figure is determined on the basis of the average annual net addition of these professionals in hospitals between 1957-1961.

estimated requirements for an additional 500 persons in general hospitals by 1971 for each of the following paramedical groups: physiotherapists, occupational therapists, medical social workers and medical record librarians. The expected supply of these auxiliary health occupations was calculated only in terms of professionally qualified persons on the assumption that non-professional personnel would be gradually replaced by fully qualified people. All figures relate to full-time professional and technical staff. This was determined by converting part-time to full-time workers on the basis that two part-time workers equal one full-time worker.

Table 3-5 shows the projected requirements and supply of selected full-time professional and technical staff employed in hospitals by 1966 and 1971.

It is evident from Table 3-5 that unless training of these categories of health personnel is accelerated some shortages in fully qualified persons will appear in most of the occupations studied here, particularly medical record librarians, physiotherapists, occupational therapists and medical social workers. The implication is that with the present rate of supply of qualified personnel the hospitals may have to rely on the services of less qualified personnel.

#### TOTAL REQUIREMENTS FOR SELECTED PARAMEDICAL GROUPS

For some paramedical personnel there will be not only a shortage in hospitals but also a shortage outside of hospitals. With the expansion of home care and rehabilitation programmes there will be an increased need for physiotherapists, occupational therapists, and speech and audiological therapists. It is not possible to estimate separately the out-of-hospital requirements for these occupations. However, it is possible to establish approximately total requirements, both in and out of hospitals, by using a population-practitioner ratio.

The Canadian Medical Association has suggested that the desirable population-personnel ratio would be 10,000 for physiotherapists, 15,000 for occupational therapists, and 25,000 for speech and audiological therapists.<sup>1</sup> Applying these ratios to the 1961 population indicates an over-all shortage of 650 physiotherapists in that year. On the basis of our population estimates (assuming net migration of 50,000 annually) and the projected supply of personnel, this shortage should decline to 250 by 1966 and disappear by 1971. With respect to occupational therapists, the shortage was 668 in 1961 and likely would gradually increase to 682 and 768 in 1966 and 1971 respectively. The shortage of speech and audiological therapists

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<sup>1</sup> *The Canadian Medical Association*, brief submitted to the Royal Commission on Health Services, Toronto, May 1962, pp. 65 and 66.



amounted to 630 in 1961 but is projected to decline to 562 in 1966 and 529 in 1971.

It is evident that if the needs of Canadians are to be met in these areas, the supply of paramedical personnel must continue to grow and a special effort must be made to increase the number of occupational therapists and speech and audiological therapists.

### *Conclusion*

For every physician today there are many other members of the health team. The growth in these paramedical personnel is due, in part, to their support of the physician in the increasingly complex field of health care, and in part, to the shortage of physicians and nurses in the face of a rising demand for health services. As we have noted, the responsibility for developing training programmes for the paramedical personnel has been undertaken to a large extent by hospitals, universities, national professional and accrediting associations and specialized institutions.

These occupations are predominantly female and suffer from rapid turnover with a resulting heavy expenditure for training purposes in order to maintain an adequate supply. The evidence at our disposal indicates that if these occupations could attract a larger number of males this high turnover rate could be decreased with a consequent saving in training expenditures. We believe that this situation can be improved if financial assistance is given to students in training and salaries are revised to attract men into these occupations.

Since 1948 the Professional Training Grant, other health grants and later the hospital insurance programmes as well as the Technical and Vocational Training Programme, have provided funds for the training of personnel in these fields, and there is no doubt that these grants have helped to train a significant number. Despite these financial incentives there is still a substantial proportion without the required standard of training. We think the time has come for a major effort to fill the gaps in the supply of these personnel so that the health team can provide the paramedical health care services of the highest quality.

### *The Commission recommends:*

- 204. That there be established in each province a Paramedical Education Planning Committee, advisory to the provincial Health Planning Councils, to plan and direct the orderly development of the education and training of paramedical personnel. The Committee should be representative of the various provincial paramedical associations, university(ies), the Health Services Commission and the Department**

- of Education, and advise the Health Planning Council of those paramedical fields in which shortages of personnel exist, training facilities needing expansion, training programmes and other matters concerned with the supply of and demand for paramedical personnel.
205. That, to encourage suitable personnel to enter and remain in these occupations, salaries commensurate with their training and responsibilities and similar to those in comparable fields be paid by federal and provincial agencies and by hospitals.
  206. That financial assistance under the Hospital Insurance and Diagnostic Services Act, and under the Technical and Vocational Training Assistance Act be expanded immediately to support any qualified applicants enrolling in courses of training prescribed for those paramedical fields in which shortages exist. On the national level we foresee shortages particularly in the following occupations: medical record librarians, physiotherapists, occupational therapists, speech therapists and audiological therapists, and medical social workers.
  207. That financial assistance be provided to set up Departments of Rehabilitation in the medical schools at l'Université de Sherbrooke and at the University of Ottawa and such other universities as may be able to provide adequate training for paramedical personnel in this field.
  208. That training facilities for speech therapy and audiological therapy be established in association with the medical schools of Dalhousie University, University of British Columbia within its Health Sciences Centre, and with one of the medical schools located in the Prairie Provinces.
  209. That training facilities for physiotherapy and occupational therapy be provided in association with those medical schools which do not already possess such facilities.
  210. That, in order to provide a continuous and uninterrupted supply of qualified paramedical personnel, more efforts be made to attract men into certain health occupations by ensuring working conditions, and especially salaries, competitive with other comparable occupations.

## OTHER HEALTH PERSONNEL

### *Optometrists*

In Volume I of our Report we referred to the functions and the numbers of optometrists. In Canada there are two schools for optometrists, namely the College of Optometry of Ontario in Toronto and l'École d'Optométrie, Université de Montréal. Over the years 1940 to 1961 inclusive there were 911 graduates in optometry from these schools. On the average, there

were about 30 graduates per year except during each of three years 1948 to 1950 when this number rose to about 100 due to the inflow of many veteran students. Some Canadian optometrists obtained their training in the United States schools.

The professional training programme for optometrists extends over a period of four academic years. At the present time in order to practise as an optometrist in Canada, an applicant must be a graduate of an accredited institute and meet the examination requirements of the Provincial Board of Examiners in Optometry. Each province has its own provincial Optometrical Association or Society which issues licences.

During the last three decades the number of optometrists has not kept pace with the growing Canadian population; consequently the population-optometrist ratio progressively deteriorated. In 1931, the number of optometrists was 1,240 giving a ratio of 8,286 while in 1941 the number was 1,321 and the corresponding ratio was 8,626. Between 1951 and 1961, the number of optometrists increased slightly from 1,348 to 1,429 but the ratio became less favourable being 10,374 in 1951 and 12,737 in 1961.<sup>1</sup> On the other hand, a higher degree of urbanization of our population in recent years makes possible better utilization of the services of optometrists located in urban centres.

Provincial population-optometrist ratios and estimated additional requirements for optometrists in 1961 are shown in Table 3-6. This measure of the adequacy of supply—like all population-personnel ratios—is subject to limitation but there is little evidence to suggest that there is any pressing shortage at present and it is likely that many optometrists could see more people if such people presented themselves for examination.

In view of the recommendations that we have made concerning optical services rendered by optometrists it is even more difficult to project the supply and demand for these personnel over the next decade. Table 3-7 indicates the number of optometrists that would be needed to match the growth of population on the basis of the ratio that existed in 1961. Over the decade the number required rises from 1,429 to 1,774. To match this growth, and to offset the attrition of personnel due to retirement, death and emigration, there would be the graduates of two schools of optometry which could be expected with present facilities to produce an average of 40 graduates a year over the period 1961-1966 and perhaps 50 graduates a year over the period 1967-1971. Other graduates could become available from American schools of optometry but compared with the number required to meet the 1961 population-optometrist ratio there would be a deficit of 165 in 1966 and 288

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<sup>1</sup> Data on number of optometrists were obtained from the provincial Optometrical Associations. The above figures exclude Yukon and Northwest Territories and the 1931 and 1941 figures exclude also Newfoundland and Prince Edward Island.



**TABLE 3-6 POPULATION-OPTOMETRIST RATIOS AND ESTIMATED REQUIREMENTS FOR OPTOMETRISTS, CANADA AND PROVINCES, 1961**

Province	Number of Optometrists	Population-Optometrist-Ratio	Required Number of Optometrists		Deficit or Surplus	
			(1) at National Ratio 12,737	(2) at Improved Ratio 11,987†		
Newfoundland.....	6	76,309	36	38	-30	-32
Prince Edward Island.....	5	20,926	8	9	-3	-4
Nova Scotia.....	38	19,395	58	61	-20	-23
New Brunswick.....	44	13,589	47	50	-3	-6
Quebec.....	420	12,522	413	439	+7	-19
Ontario.....	533	11,700	490	520	+43	+13
Manitoba.....	60	15,361	72	77	-12	-17
Saskatchewan.....	70	13,217	73	77	-3	-7
Alberta.....	112	11,892	104	111	+8	+1
British Columbia.....	141	11,554	128	136	+13	+5
Canada*.....	1,429	12,737	1,429	1,518	0	-89

\*Excludes Yukon and Northwest Territories.

†This ratio is the weighted average ratio of Quebec, Ontario, Alberta and British Columbia in 1961, whose ratios were better than the national ratio.

in 1971. This estimate does not take into account the increase in the supply over this period of ophthalmologists who perform refractions. To the extent that ophthalmologists rather than optometrists perform refractions, this would reduce the demand for the latter's services.

**TABLE 3-7 PROJECTED REQUIREMENTS AND SUPPLY OF OPTOMETRISTS, 1966 AND 1971\***

Year	Number of Optometrists Required at 1961 Ratio 12,737	Expected Supply	Deficit in Supply
1961.....	1,429	1,429	—
1966.....	1,594	1,429	-165
1971.....	1,774	1,486	-288

\*Projected population assuming 50,000 net immigration per annum.

The impact of the Optical Services Programme that we recommended in Volume I on the demand for optometrists will of course depend primarily on the extent to which existing and future graduates in optometry meet the educa-



tional standards we have indicated.<sup>1</sup> The whole question of supply is therefore involved with the facilities needed to provide this education. To the extent that some educational facilities are made available in existing medical schools or in new medical schools, it may be possible to expand the supply of qualified optometrists without building additional facilities in optometric colleges.

In short, given the evidence at our disposal at this time, we cannot recommend expansion of existing means for training optometrists. Instead, we suggest that provincial health planning councils review the resources available to achieve the objectives we recommend in this area. At the same time they could examine the need for expansion of schools of optometry. Schools of optometry must be affiliated with the medical school at a university or become an integral part of the health education facilities in a university.

<sup>1</sup> See Volume I, pp. 45-50. The principal comments relating to optometry are as follows:

- (1) The shortage of ophthalmologists and the long period of their training makes any proposal for restricting all prepaid eye care in the Health Services Programme to that profession wholly unrealistic. Optometrists must be used and their qualifications upgraded.
- (2) Since we believe that the schools of optometry do not provide adequate training in recognition of pathological eye conditions, there are two solutions:
  - (a) the need for provision in the present curriculum for increased training in anatomy, physiology, pathology, and in the use of cycloplegics. This instruction should be provided by qualified instructors in the medical school faculties. This will solve the problem, however, only for those optometrists graduating after the implementation of our recommendation for upgrading, say, 1968.
  - (b) the need for provision of courses in anatomy, physiology, pathology, and in the use of cycloplegics for optometrists now in practice through programmes of continuing education in the medical schools or in the Schools of Optometry provided by qualified instructors from medical school faculties. Co-operation from the medical profession to provide this instruction is essential and no refusal by the medical profession, or the medical school faculties, to assist in upgrading the optometrist can be tolerated. The objective should be a properly qualified optometrical profession practising their profession as such, and not relying on the sale of frames and other merchandise as their principal source of income.
- (3) There is a strong case, we believe, for optometrists to be employed, as they are now employed in the Canadian Forces Medical Service, under the general direction of ophthalmologists in "eye clinics" or group practice clinics. This arrangement of practice would remove our concern about the completeness of the diagnostic examination and seems to us to represent a most effective co-ordination of skills.

*The Commission recommends:*

85. That refractions be provided by ophthalmologists, other qualified physicians, and by optometrists who graduate in or after 1968, and by optometrists who by the year 1967 have taken the recommended additional training in anatomy, physiology, pathology, and in the use of cycloplegics.
86. That the schools of optometry be affiliated with the universities in the cities in which they are located, and the respective Medical School Departments should assume responsibility for the courses in anatomy, physiology, and pathology, and in the use of cycloplegics. Special courses should be provided in these subjects for optometrists now in practice, so that all who wish to do so may qualify to participate in the programme. The tuition fees, travelling and living expenses incurred by optometrists in taking such courses should be regarded as deductible expenses for income tax purposes.
91. That in order to augment our scarce resources in the field of vision care, consideration be given by both ophthalmologists and optometrists to uniting their special skills and their efforts in various forms of group practice.

## Opticians

The optician's function of providing glasses and lenses is similar to that of the pharmacist in regard to prescribed drugs. The optician, or ophthalmic dispenser, has been described as "an auxiliary to medicine, who supplies and fits lenses, spectacles, eye glasses, artificial eyes, contact lenses or appurtenances thereto for the aid or correction of visual or ocular anomalies of the eyes, on the prescription of an ophthalmologist".<sup>1</sup> A prescription for glasses may also originate from an optometrist following a refraction. We have outlined in Volume I the respective roles of the ophthalmologist, the optometrist, and the dispensing optician.<sup>2</sup>

Like many other health professions and occupations, the qualifications for opticians are changing from apprenticeship to formal training ending in examinations and licensing.<sup>3</sup> Three provinces now have legislation providing for the licensing of opticians.<sup>4</sup> In several other provinces legislation is under consideration.

Reliable figures on the number of opticians are difficult to obtain, partly because of the differing standards in the provinces and partly because of the absence of compulsory registration.<sup>5</sup> Furthermore, the training of opticians has in the past not always been clearly distinct from that of the optometrists, and some qualified optometrists prefer to practise as opticians. The Canadian Guild of Dispensing Opticians, the national organization, is a voluntary association rather than a registering body. Though there may be several qualified opticians working in a firm or establishment, only one is registered while the others may join as associate members if voted in by other members.<sup>6</sup> The Guild has no licensing function. Opticians practise their calling either as individuals, in groups, or as employees of commercial suppliers of optical equipment. In the absence of the necessary data, no assessment of the manpower situation in this field is possible.

It is certain, however, that modern knowledge and techniques in the provision of vision aids require that the optician meet certain standards of proficiency in his field, and that licensing legislation determining such standards should be implemented in all provinces.

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<sup>1</sup> *The Association of Dispensing Opticians of Ontario*, brief submitted to the Medical Services Insurance Enquiry, p. 3.

<sup>2</sup> See Volume I, Chapter 2, p. 46.

<sup>3</sup> A school exists in Quebec and a correspondence course is available in Ontario with examinations to be written before a licensing board.

<sup>4</sup> Manitoba, Ontario and Quebec.

<sup>5</sup> It is estimated that there are between 700 and 800 dispensing opticians in Canada; of these, 652 are licensed in the three provinces mentioned (communication received from the Canadian Guild of Dispensing Opticians).

<sup>6</sup> *Ibid.*

*The Commission recommends:*

- 211. That legislation regarding the qualification and licensing of dispensing opticians be enacted in all provinces and territories.**

#### CONTACT LENSES

The present practices in the provision of contact lenses are a matter of concern to this Commission. We have emphasized in Volume I of our Report the need for more adequate training than has generally been obtained in the past in order to fully qualify optometrists to undertake eye examinations for refractions and the provision of glasses. Contact lenses, however, because of their immediate contact with the delicate anatomy of the eye, call for great care, and we have come to the conclusion that only the trained medical specialist in the field, i.e., the ophthalmologist, is qualified to determine not only the specifications of the lens but also whether, in the individual case, such lens can be worn without risk to the eye.

*The Commission recommends:*

- 212. That legislation be enacted restricting the sale of contact lenses by anyone, except on prescription by an ophthalmologist.**

#### *Podiatrists*

Podiatry is concerned with the treatment of muscular-skeletal and some cutaneous foot ailments which are increasingly evident in older patients.

In Canada podiatric services are largely provided by private practitioners in offices but they are also supplied in foot clinics in some hospitals and, in a few instances, in industrial clinics.

The practice of podiatry throughout Canada is generally regulated by provincial legislation, which requires a candidate to pass a licensing examination set by the Board of Examiners in Podiatry. Only graduates of an accredited college of podiatry are eligible to write the licensing examination.

Training programmes at these colleges are of four years' duration and prerequisites for admission include the prior completion of one or two years premedical studies. At present there is no podiatry college in Canada and all Canadian podiatrists obtain their formal training in the United States schools.

In 1961, there were approximately 140 podiatrists practising in Canada, giving a ratio of 132,000 persons per podiatrist. Corresponding ratios for the United States and United Kingdom were 23,000 and 33,000 respectively.<sup>1</sup> We have recommended<sup>2</sup> that podiatric services be included under the medical services benefits, when prescribed by a physician.

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<sup>1</sup> *The Canadian Podiatry Association*, brief submitted to the Royal Commission on Health Services, Toronto, May 1, 1962, p. 3.

<sup>2</sup> See Volume I, Chapter 2, Recommendation 30(m), p. 33.



## DRUGLESS PRACTITIONERS

### *Chiropractors*<sup>1</sup>

Chiropractic has been defined before the Commission as:

"The science of chiropractic deals with the relationship between the articulations of the human body, especially the vertebral column, and the nervous system and the role of these relationships in the restoration and maintenance of health.

"The philosophy of chiropractic is based upon the premise that disease or abnormal function is frequently caused by interference with nerve transmission and expression, due to deviation from their normal position, of the bony segments of the body, especially the vertebral column.

"The practice of chiropractic consists of the location and correction of misalignments causing any interference with normal nerve transmission and expression, for the restoration and maintenance of health, without the use of drugs or surgery."<sup>2</sup>

In all provinces except Newfoundland, Prince Edward Island, Nova Scotia and Quebec the profession of chiropractors is governed by provincial legislation.<sup>3</sup> In the provinces with such legislation only chiropractors registered under it are allowed to practise their profession. To qualify for registration the chiropractor must pass a special examination<sup>4</sup> and be a graduate from an accredited chiropractic college.

All provinces with chiropractic legislation allow injured workmen to select a chiropractor under the Workmen's Compensation Act. An Alberta Order in Council authorizes payment for chiropractic services under the Treatment Services Act, and in Manitoba these services are covered under the Social Allowances Act.<sup>5</sup>

All the provincial acts make it illegal for chiropractors to prescribe or administer drugs, to use or prescribe the use of an anaesthetic, to practise surgery or mid-wifery, to practise medicine, and, in some provinces, the chiropractors may not treat communicable diseases. However, some provincial

<sup>1</sup> In questionnaires distributed to chiropractors, naturopaths and osteopaths which were returned to the Royal Commission on Health Services, some chiropractors referred to themselves as either chiropractor or chiropractor-naturopath. In fact, some practitioners maintain membership in both the Canadian Chiropractic Association and the Canadian Naturopathic Association. It is, therefore, impossible in many cases to separate statistically the two groups.

<sup>2</sup> *The Canadian Chiropractic Association*, brief submitted to the Royal Commission on Health Services, Toronto, May 1962; *The Journal of the Canadian Chiropractic Association*, Volume VI, No. 3, August 1962, p. 6.

<sup>3</sup> Drugless Practitioners Act in Ontario and Chiropractic Act in British Columbia, Alberta, Saskatchewan, Manitoba and New Brunswick.

<sup>4</sup> In most provinces chiropractic boards are solely responsible for conducting the examination except in Saskatchewan where the University of Saskatchewan is responsible for setting the basic sciences part of the examination and where medical faculty and officers of the chiropractic profession sit on the board of examiners chaired by the dean of medicine.

<sup>5</sup> Mills, D., *Chiropractors, Osteopaths and Naturopaths in Canada*, a study prepared for the Royal Commission on Health Services, Chapter 1, Ottawa: Queen's Printer (*in press*).



acts permit X-ray privileges. Canadian hospitals rarely allow chiropractors the use of hospital facilities for either diagnosis or treatment of their patients.

The Canadian Memorial Chiropractic College in Toronto is the only institution offering a training programme in chiropractic in Canada. Formal educational requirements for admission to this college are the Ontario Grade 13 certificate, or its equivalent, and the training course is of four years duration. Between 1949 and 1961 inclusive there were 669 graduates from that school.<sup>1</sup> However, during the same period 605 Canadians graduated from accredited colleges of chiropractic in the United States.<sup>2</sup>

There has been an increase in the number of chiropractors in Canada. In 1943 there were 668 active chiropractors, in 1951 about 740, and in 1961 their number rose to 1,073, of which 450 were in Ontario, 240 in Quebec, 148 in British Columbia and 121 in Alberta, but only 36 in the Atlantic Provinces.<sup>3</sup> In 1964 there were approximately 400 active in Quebec.

In 1950-51 about 128,000 or 1.0 per cent of the Canadian population reported obtaining services from chiropractors as compared with 5,851,000 or 43.2 per cent obtaining services from medical practitioners.<sup>4</sup>

In a survey of chiropractors undertaken by the Commission 45 per cent indicated that they consider themselves to be specialists although there is no body empowered to grant specialist status. Of this group the largest proportion claimed to be musculo-skeletal specialists. Among the other specialties mentioned were neurological, manipulative therapy, gastro-intestinal disorders, cardiovascular conditions, general organic work, improved radionics and colonic therapy.<sup>5</sup>

In the same survey chiropractors were asked to list the major items of diagnostic equipment used. Seventy-six per cent answered that they possessed radiological equipment. Of chiropractors who use X-ray in diagnosis, 7 per cent said that they X-rayed all patients, 33 per cent X-rayed two-thirds or more of their patients, and a further 10 per cent said that they X-rayed about one-half of their patients.<sup>6</sup> This Commission is aware that with adequate safeguards and proper use, radiography is an invaluable diagnostic procedure, but over-use or its use by those without the proper qualifications can be a danger to the health of both patient and practitioner. In addition, the interpretation of X-ray films by those without the proper qualifications is useless as well as dangerous.

<sup>1</sup> Transcript of evidence, *Hearings*, May 17, 1962, Vol. 55, pp. 10492-10496; and *The Canadian Chiropractic Association, op. cit.*, p. 73.

<sup>2</sup> *Ibid.*, p. 76.

<sup>3</sup> *The Canadian Chiropractic Association, op. cit.*, p. 10.

<sup>4</sup> Department of National Health and Welfare and Dominion Bureau of Statistics, *Illness and Health Care in Canada*, Canadian Sickness Survey, 1950-51, Ottawa: Queen's Printer, 1960, Table 113, p. 193, and Table 57, p. 156. Data for later years are not available.

<sup>5</sup> Mills, D., *op. cit.*, Chapter 5.

<sup>6</sup> *Ibid.*

Chiropractors also use therapeutic equipment, as distinguished from the diagnostic equipment mentioned above. The major items in this category are as follows: physical structure corrective, electrical thermal, electrical multi-functional, mechanical, hydrotherapeutic, and inhalation therapy.<sup>1</sup>

The Faculty of Medicine of McGill University in its presentation before the Royal Commission on Chiropractic in the Province of Quebec stated that "the theory which underlies chiropractic is false, and no consistently successful practice can be expected to result from false theory".<sup>2</sup>

The Canadian Medical Association also asserted that it will support any programme of medical services insurance which adheres among other principles to the following: "that all persons rendering services are legally qualified physicians and surgeons".<sup>3</sup> Another medical organization referring to practitioners licensed under the Drugless Practitioners Act suggested that "such groups lack appreciation of their own limitations and tend to apply their concepts beyond their knowledge and abilities, and under such circumstances constitute a distinct threat to life and limb".<sup>4</sup>

Against these criticisms the chiropractors say that after the Second World War the Department of Veterans Affairs sponsored chiropractic training in the Canadian Memorial Chiropractic College and the Workmen's Compensation Boards in most provinces recognize chiropractic on an equal basis with medicine.<sup>5</sup> The national organization of the chiropractors claims that "the members of the chiropractic profession make a special and necessary contribution to the health needs of Canadians" and that "Chiropractic has earned and deserves full recognition as a major member of the family of health methods on an equal basis with other recognized branches of the healing arts".<sup>6</sup>

It is obvious that there is a great gulf between the positions taken by the medical profession and chiropractors. The medical profession maintains that there is no scientific basis for the claims made by chiropractors or that chiropractic is a science and states further that chiropractic has no therapeutic value other than in the field of physiotherapy. Chiropractors, on the other hand, claim that theirs is a science.<sup>7</sup> This divergence of opinion can readily be seen as a fundamental scientific one beyond the competence of this Commission to resolve.

<sup>1</sup> *Ibid.*

<sup>2</sup> *The Canadian Medical Association Journal*, September 7, 1963, Volume 89, p. 2.

<sup>3</sup> The Canadian Medical Association, Preliminary Statement, September 27, 1961, *Transcript*, Volume 1, p. 106.

<sup>4</sup> *The College of Physicians and Surgeons of Ontario*, brief submitted to the Royal Commission on Health Services, May 1962, p. 4.

<sup>5</sup> Evidence of Mr. J. S. Burton, the General Counsel for the Canadian Chiropractic Association, September 28, 1961, *Transcript*, Volume 2, p. 191.

<sup>6</sup> *The Canadian Chiropractic Association*, *op. cit.*, p. 3.

<sup>7</sup> See their statement on p. 76.

The controversy has been going on for upwards of half a century and is one that ought to be faced and resolved in the public interest. We considered recommending to His Excellency, The Governor General in Council, that an independent scientific study be undertaken to resolve the issue. However, we now know that such a study is currently being done by Mr. Justice Lacroix of the Superior Court of Quebec who was named as a Royal Commissioner by the Government of Quebec "pour faire enquête sur la chiropraxie et la profession d'ostéopathe dans le Québec". We have consulted with Mr. Justice Lacroix and are convinced that the investigation being made by him is an impartial and thorough one. Justice Lacroix's inquiry is still proceeding. His findings and recommendations will be formulated only after this volume has been completed.

We believe that the report and findings of Mr. Justice Lacroix will be definitive and have application not only to the situation in Quebec but throughout the rest of Canada. Pending the report and findings of Mr. Justice Lacroix, we recommended in Volume I<sup>1</sup> that the medical services benefit should include chiropractic treatment when prescribed by a physician. We do not wish to make any recommendation to include chiropractic treatment as a health service under our programme beyond this until the Quebec Report is available.

If the study now being done by Mr. Justice Lacroix concludes that the position taken by the medical profession is the correct one, then all Canadians should be made aware of it. On the other hand, if the claims of chiropractors are found to be valid, they then should be incorporated into and integrated with the teaching of the health sciences in universities. No good can come from warring factions being competitors in the health care field. It is, in our view, fundamental to good health care, that all who labour legitimately in the field should do so in harmonious co-operation.

### *Naturopaths*

Naturopathy has been defined as "a system of therapy that treats human injuries, ailments or diseases by methods of nature, including any agency of nature, and employs as auxiliaries for such purpose the use of electro-therapy, hydrotherapy, body manipulation and dietetics".<sup>2</sup>

All provinces in Canada, excluding Quebec and the Atlantic Provinces have passed licensing legislation with respect to the practice of naturopathy, which is restricted to recipients of diplomas from accredited schools of naturopathy who successfully complete the licensing examination set by the provincial examining board. There is no accredited school for the training of naturopaths in Canada. In general, the scope of practice of naturopathy is

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<sup>1</sup> See Volume I, Chapter 2, Recommendation 30(m), p. 33.

<sup>2</sup> *An Act to amend Naturopathy Act, 1955*, Chapter 50, Section 2, Province of Alberta.



subject to legislative restrictions similar to that regulating chiropractic mentioned above.

It has been estimated that in 1962 there were about 140 active naturopaths in Canada.<sup>1</sup> Their number is not growing and they are not scientifically oriented to the extent that they should be included as providers of services to be paid for under the comprehensive health services recommended.

### *Osteopaths*

Osteopathy is defined as the art and science of diagnosis and treatment of diseases and injuries that emphasizes manipulative procedures and employs medical appliances including radiographs in diagnosis and treatment.

In Canada osteopaths are without hospital privileges and consequently most osteopathic treatments are provided in offices and in the home.

In all provinces excluding Quebec, Prince Edward Island and Newfoundland, legislation governs the practice of osteopathy and only Manitoba and Saskatchewan have specific osteopathic acts, while in Ontario it comes under the Drugless Practitioners Act and in the other provinces it is controlled by medical acts. In the provinces with legislation, practice is restricted to graduates from an accredited osteopathy college who pass the licensing examination. In Nova Scotia, however, graduation from an accredited medical school is required. Since there is no school in Canada for the training of osteopaths, Canadians obtain their education in the United States and, in general, they tend to remain there because osteopathy enjoys a higher status and, in many states, hospital privileges.

Osteopathy is a declining profession in Canada. In the 1930's there were about 200 active osteopaths but in 1962 only 105 were actually practising. Moreover, about four-fifths of them were over 50 years old.<sup>2</sup>

The trend in the United States is to incorporate into the regular practice of medicine, osteopathic physicians who conform to the standard practice of medicine. There has not been a comparable development in Canada. We see no need for the establishment of a separate College of Osteopathy in Canada. It is our view that all health sciences should be under the aegis of universities.

## SPECIAL PROBLEMS

The Commission has, following its Terms of Reference, reviewed the whole field of health services, present and future, in Canada. Because of the vastness of the task, however, it has not been able in its Report to offer a

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<sup>1</sup> This number refers to naturopaths only and does not include naturopaths who are also chiropractors. See Mills, D., *op. cit.*, Chapter 2.

<sup>2</sup> Mills, D., *ibid.*



solution for every problem and we are well aware that a number of subjects received either no attention at all or are insufficiently covered though they may be of importance to those engaged in the provision of those health services. Many problems were clearly beyond our competence and resources; in regard to others it was simply a matter of having to be selective but we hope we have covered at least the main areas.

Aware of the inevitable gaps in our Report and also convinced that the rapid scientific development in the health field will continue to create new problems and changing situations, we have recommended the mechanism to continue the work begun by this Commission. This, we envisage, will be done by the Health Sciences Research Council in conjunction with the co-operative health services organization we recommend.

There are two items, however, generally related to health practice, on which we want to comment as a result of our observations. They concern the use of professional titles in the health field, and the possible radiation hazards from radiography. We have singled out these two matters, the first because the conclusions seemed obvious to us, and the second because of the possible risks involved in further delaying the general application of protective measures.

### *Professional Titles*

A source of confusion to the public is the indiscriminate use of the "Doctor" title. The entitlement to its use follows from the granting of an advanced university degree. The right to confer this advanced degree is restricted, by provincial legislation, to recognized universities. These institutions award two types of doctoral degrees: (1) the earned doctorate conferred after a minimum of six years of academic and/or professional discipline; (2) the honorary doctorate awarded to selected citizens for outstanding contributions to society.

In the health field, the use of the title "Doctor" by persons without a doctor's degree from a recognized medical or dental school not only misleads the public but debases the worth of the degree earned by rigorous education in the universities. This situation should be corrected by restricting the use of the doctoral title in the health field only to those to whom it has been awarded by recognized universities.

### *The Commission recommends:*

213. That legislation be enacted to provide that no practitioner of any healing art without a doctoral degree granted by a recognized university be permitted to designate himself as "Doctor", or to use any letter following his name indicating the same, or to advertise himself as such.

## Radiography

Recent experience with atomic fall-out has highlighted, as never before, the hazards to human life and health from excessive radiation. In the mid-fifties, widespread apprehension in Canada and elsewhere led to intensive studies on the biological effects of atomic radiation. Both the Medical Research Council in the United Kingdom and the United States National Academy of Sciences have assessed the effects of radiation on man. The United Nations established, in 1956, a Scientific Committee on the Effects of Atomic Radiation, in whose work Canadian scientists participated.

These studies have drawn attention to the importance of radiation from sources other than fall-out, namely natural radiation and medical irradiation, with the latter accounting for a substantial portion of the risks involved.<sup>1</sup> As a consequence the radiation effects from diagnostic X-rays have been the object of intensive study. In 1957, the Ontario Tuberculosis Association established a special committee on radiation. This committee concluded that the application of modern techniques can reduce the radiation from chest X-ray examinations to "an extremely low level" and that the benefits from "properly conducted" chest X-ray programmes far outweigh any possible slight harm associated with X-ray exposure.<sup>2</sup> Other studies also put the emphasis on the need for the use of proper equipment by qualified persons.<sup>3</sup> The question, "are diagnostic X-ray examinations dangerous?" is answered with a flat "no" by one author who adds, however, that this is "dependent upon our acceptance of all the practicable precautionary measures which may be taken".<sup>4</sup> This statement is based on a report by the United Nations Scientific Committee on the Effects of Atomic Radiation.<sup>5</sup>

Despite the potential hazards from inadequate equipment or unqualified operators, only little legislative action has been taken at the provincial level to ensure the control of radiation from the use of X-ray equipment. Table 3-8 discloses that Nova Scotia is at present the only province with licensing regulations covering both X-ray technicians and equipment.

It is essential that licensing regulations applicable to the technicians as well as the equipment be instituted in all provinces. They should ensure uniformly high standards of safety throughout Canada, not only by regulating the initial licensing but also by providing for periodic inspection to ensure

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<sup>1</sup> Bird, P. M., "Radiation Protection in Canada—Part I", reprint from the *Canadian Medical Association Journal*, Volume 90, April 25, 1964, pp. 1024-1030, p. 3.

<sup>2</sup> "Radiation and the Tuberculosis Chest X-Ray Examinations Program", Report of the Committee on Radiation, Medical Section, Ontario Tuberculosis Association, *Canadian Medical Association Journal*, Volume 79, July 15, 1958, p. 89.

<sup>3</sup> Lindell, B., and Dobson, R. L., *Ionizing Radiation and Health*, WHO Public Health Papers 6, Geneva, 1961, p. 32.

<sup>4</sup> Stapleton, J. G., "Are Diagnostic X-Ray Examinations Dangerous?", *Canadian Medical Association Journal*, Volume 79, July 15, 1958, p. 89.

<sup>5</sup> "The Responsibilities of the Medical Profession in the Use of X-Rays and Other Ionizing Radiation", *British Journal of Radiology*, Vol. 30, 1957, p. 282.

TABLE 3-8 SUMMARY OF PROVINCIAL ACTIONS AFFECTING HEALTH AND SAFETY IN REGARD TO X-RAYS

Provinces with specific enabling Legislation applicable to X-rays	Provinces with detailed Regulations applicable to X-rays	Provinces prohibiting shoe-fitting X-ray Fluoroscopes	Provinces with specific Legislation applicable to Qualifications of Radiation Technicians
Nova Scotia Quebec Ontario Saskatchewan Alberta	Nova Scotia (registration of equipment and operators) Saskatchewan (registration of equipment: —approval of industrial layouts —qualifications of operators)	Nova Scotia Manitoba Saskatchewan Alberta	Ontario (medical) Saskatchewan (medical and industrial) Alberta (medical and industrial)

SOURCE: Based on Bird, P. M., "Radiation Protection in Canada—Part I", Reprint from *Canadian Medical Association Journal*, Volume 90, April 25, 1964, pp. 1024-1030, p. 6.

that safety standards are maintained. One important means of observing, indirectly, the maintenance of adequate safety measures is the film monitoring service available from the Radiation Protection Division of the Department of National Health and Welfare which provides a continuous radiation-exposure record for workers exposed to radiation from X-ray equipment and other sources. Participation in this service is voluntary rather than mandatory but its fullest use is advisable and should be made part of the licensing procedure.

Federal control and surveillance of radiation risks from X-ray equipment are limited to consulting and inspection services provided on request. The film monitoring service is one of these. In 1963, the Department of National Health and Welfare established an advisory committee on the development of X-ray safety standards. The committee has provincial as well as professional representation and is expected to make detailed recommendations to serve as a basis for uniform safety standards and procedures throughout Canada.<sup>1</sup>

Radiation exposure also has genetic effects: here the danger is to the life and health of the offspring of the individual exposed. Knowledge of the genetic effects of radiation is still limited but scientific evidence suggests that any exposure no matter how small may have harmful genetic consequences

<sup>1</sup> Bird, P.M., "Radiation Protection in Canada—Part II", Reprint from *Canadian Medical Association Journal*, Volume 90, May 2, 1964, pp. 1075-1080, p. 8.



because of the cumulative effect.<sup>1</sup> A study of the radiation resulting from diagnostic X-rays<sup>2</sup> revealed that practically all the genetically significant dose resulted from diagnostic examinations of three body regions (pelvic, genito-urinary, and gastrointestinal), with about 70 per cent of the total due to examinations of the male pelvic region. In view of their invaluable contribution to present diagnostic standards, the use of X-rays in diagnosis is essential. However, because of the probability of genetic ill-effects of radiation, diagnostic X-rays should be used only when necessary.<sup>3</sup> In view of this, the growing tendency among some groups of private practitioners to emphasize and advertise the use of X-ray equipment in order to enlarge their practice is injurious to the nation's health and must be stopped.

Apart from the radiation hazard from diagnostic radiology, there is the problem of the interpretation of radiographs by unqualified practitioners who lack the training necessary to ensure proficiency in this vital area of health care. That diagnostic radiologists require four years of specialty training after medical graduation is ample evidence of the complexity of interpreting radiographs. Incorrect diagnosis, due to misinterpretation of radiographs, may result in a therapy that is deleterious to the patient's health. Consequently, the field of radiograph interpretation should be reserved for those who are qualified to practise it.

*The Commission recommends:*

214. That provincial legislation provide, to the extent that this is not already done, for the licensing of X-ray equipment, technicians, and operators, according to accepted uniform standards and ensuring that such standards are maintained after the initial licensing.
215. That provincial legislation be enacted to restrict the advertisement of diagnostic X-ray facilities.
216. That the proper scientific agencies continue the intensive study and observation of the consequences of radiation, including that resulting from diagnostic radiography.
217. That the reading and interpretation of radiographs be undertaken only by recognized personnel.

*Ambulance Services*

Lack of legislation governing the services rendered by ambulance personnel appears to be one of the major gaps in general health services.

<sup>1</sup> Stapleton, J. G., *op. cit.*, p. 92.

<sup>2</sup> Bird, P. M. "Radiation Protection in Canada—Part III", Reprint from the *Canadian Medical Association Journal*, Volume 90, May 9, 1964, pp. 1114-1120, p. 19.

<sup>3</sup> Loughheed, Marvin N., "Present Concepts of Radiation Hazards", *Ibid.*, pp. 97 and 98, and Duggan, H. E., "Radiation Protection in Canada—Part IV", *The Canadian Medical Association Journal*, Volume 91, October 24, 1964, p. 894, and Lindell, *op. cit.*, p. 35.



There are only two provinces, Saskatchewan and Alberta, which have provincial legislation regarding the operation of ambulance services. In Saskatchewan, legislation covering ambulance services under the Public Health Act of 1958 requires an ambulance owner to register each December, and an ambulance driver or attendant to have a current senior first-aid certificate issued by the St. John Ambulance Association. Operators must also attend special one-day courses in advanced first-aid at intervals of not more than three years. A provincial act in Alberta requires ambulance drivers to have two-year St. John Ambulance certificates, and attendants three-year certificates. The act also stipulates minimum equipment requirements. With the above two exceptions, provincial Highway Traffic Acts concern themselves solely with the right of way of emergency vehicles, use of sirens and speed limits. Most laws governing standards of ambulance services have been passed by municipal councils but there are some municipalities which have no such regulations.<sup>1</sup>

Ambulance services in Canada are provided by various bodies such as provincial governments, fire and police departments, hospitals, municipalities, private companies and funeral parlors. Charges per call within city limits ranged in 1963 from \$4.00 in St. John's to \$18.00 in Vancouver and there are additional charges for service beyond city limits.

Prompt first-aid is an important factor in the care of the accident victim or other emergency cases pending professional treatment. It has been stated that "the success of definite treatment and the ultimate rehabilitation of a seriously ill or violently injured person are largely dependent on the initial handling of the emergency. The patient's fate may be contingent on the attention he receives at the site of the accident and during his transportation to a hospital".<sup>2</sup> Efficient ambulance service can save lives, diminish the period of hospitalization or the extent of permanent disability. This service becomes more important as accident rates continue to grow in traffic, home and industry.

We recommended, therefore, in Volume I that "ambulance services and similar forms of transportation of patients, except as may be designated as part of any other health service benefit"<sup>3</sup> be included among the insured services of the medical services benefit. Such an arrangement would provide adequate financial resources for essential ambulance services. We conclude that, to bring order out of chaos, uniform standards of high quality and availability of ambulance services in Canada should be instituted through provincial legislation which would set minimum standards of licensing, staffing and equipping ambulance vehicles.

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<sup>1</sup> *The Financial Post*, September 28, 1963, pp. 51 and 52.

<sup>2</sup> Young Jr., Carl B., Young, Carl B., and Fry, R., *Transportation of the Injured, Springfield, Ill.*; Charles C. Thomas, 1958, p. 207.

<sup>3</sup> See Volume I, Chapter 2, Recommendation 30(n), p. 33.

*The Commission recommends:*

218. That, in order to ensure that ambulance services are of a high quality, legislation be enacted in all provinces and territories establishing standards for the training and qualifications of ambulance staff, and for the equipment used, and that these be subject to licensing.
219. That, to ensure that such services are readily available, the provincial Health Planning Councils establish guide lines for the efficient organization of ambulance services on a regional or community basis, and, where required, of air ambulances and other emergency transport.

## Health Research

In this age of quickening scientific advance, health-related research draws upon many fields of science and many disciplines within each field. Within this broad context, the term "health research" rather than the traditional expression "medical research" is more fully expressive of the aims and efforts of our scientists to improve the mental and physical well-being of Canadians in particular and of mankind in general.

More specifically, health research may be defined as:

"...all systematic study directed toward the development and use of scientific knowledge through fundamental research in the laboratory, clinical investigations, clinical trials, epidemiological studies, and engineering studies in the following areas:

1. The causes, diagnosis, treatment, control, prevention of, and rehabilitation relating to the physical and mental diseases and other killing and crippling impairments of mankind;
2. The origin, nature, and solution of health problems not identifiable in terms of disease entities;
3. Broad fields of science where the research is undertaken to obtain an understanding of processes affecting disease and human well-being;
4. Research in nutritional problems impairing, contributing to, or otherwise affecting optimum health;
5. Development of improved methods, techniques, and equipment for research, diagnosis, therapy, and rehabilitation."<sup>1</sup>

For our purposes it is necessary to extend this definition to include studies directed towards determining quantitatively or qualitatively the progress made in achieving the goals of a health services programme. Any systematic appraisal of a health programme requires not only those statistics that measure the volume of health care, it also requires the assessment of its goals in terms of the changing health needs of the community. In view of the

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<sup>1</sup> United States Department of Health, Education, and Welfare, *Resources for Medical Research, Report No. 1*, U.S. Government Printing Office, Washington, D.C., August 1962, p. 14.

Health Services Programmes we have recommended, our definition of health research must include much more than has generally been included if Canadians are to obtain the best health care possible.<sup>1</sup>

The contribution of research to the health of mankind has, of course, been widely recognized. It has been observed that

"More curative drugs have been discovered in the past twenty-five years than in the whole previous history of medicine. Research during these years has given us antibiotics; has expanded many times our knowledge of the value and uses of blood transfusion; has made possible the daily occurrence of surgery of the heart and lung; has led to notable advances in the field of anaesthesia, making such delicate surgery possible; has given us new methods of treating those with mental illness; has given us the blood bank, the bone bank, the eye bank, the blood-vessel bank; has made it possible to save lives with the artificial kidney; has shown us how to save premature babies and how careful we should be of the eyes of these babies when we use oxygen; has given us the Cobalt 60 therapy unit; tells us of the effects of noise of the jet aircraft and of certain industries on the human ear; has given us a potent weapon against poliomyelitis; and is our tool in the fight against cancer."<sup>2</sup>

In these decades Canada too has made impressive strides in its search for knowledge to combat disease and disability. A partial list of the contributions of Canadian scientists since the discovery of insulin in 1921 would include:

"... the isolation of hormones from the parathyroid gland, the pituitary body and the placenta; the introduction and use of anti-coagulants; the use of refrigeration in major surgery; the identification of the sex chromosome; the preparation of an artificial medium for the cultivation of mammalian cells; the discovery of the function of certain areas in the cerebral cortex; methods of surgical treatment of epilepsy; the discovery of the nature of certain diseases of the liver; knowledge of the variations in metabolism in health and disease; and a host of fundamental discoveries which fit into the general pattern of scientific knowledge."<sup>3</sup>

To these achievements must be added those in the field of dental health. The research methods, the tools, and the qualifications of workers in dental research do not differ materially from those in medical research. Indeed some areas of study may overlap, e.g., studies on cancer or on bone. The ultimate objective of the dental researcher is the prevention, control and cure of disease of the mouth and teeth. Considerable advance has been made toward this objective during the past decade or so, particularly in the field of dental caries.

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<sup>1</sup>It should be noted that pharmaceutical research, sometimes called drug research, is classed as medical research in this chapter.

<sup>2</sup>Gilbert Turner quoted in the *Report of The Special Committee Appointed to Review Extramural Support of Medical Research By The Government of Canada* to the Committee of the Privy Council on Scientific and Industrial Research, Ottawa, November 1959, p. 1. This document is hereafter cited as "The Farquharson Report".

<sup>3</sup>*Ibid.*



Research in Canadian laboratories also has added to the pool of knowledge in dentistry, and continues to do so at an increasing pace. Techniques for recording and analysing data on dental disease that were developed in Canada are now being used internationally. One of the most extensive studies done anywhere in the world on the growth and development of the head and face is being carried out in Canada. The same project is evaluating the value of early interceptive therapy on subsequent treatment requirements for occlusal abnormalities. This study is now being carried over into the teen-ages, where little information is available at present. One of the most authoritative studies on the effects of water fluoridation was a Canadian study. Using the latest histochemical and biochemical techniques, Canadians have made contributions to our knowledge of the nature of the tissues of the tooth itself and its environment—knowledge that is a prerequisite to development of prevention. As personnel are trained and funds provided, dental research activities are expanding. Laboratories have now been established in such diverse fields as virology, electron microscopy and experimental embryology and will soon make their contribution felt.

In recent years the evaluation of the health of Canadians and of the health services programmes that meet these health needs also has been fostered. This type of research, with its emphasis on the collection of data on which to base policy decisions regarding the planning of programmes and the improvement of health services, principally has developed as part of the continuing assessment of provincial hospital insurance programmes and medical care prepayment programmes sponsored by the medical profession, and as part of the efforts of governments to evaluate the health status of Canadians.

Although it is difficult to assess them quantitatively, in reviewing the institutional framework of health research in Canada, one also must not overlook the substantial contributions made outside universities, laboratories, hospitals, and health departments, by members of the health professions—individually, in teams or in committees in all of these areas.

Despite these developments the amount of health research undertaken in Canada in recent years, whether measured by the number of personnel involved or the sums of money spent, was inadequate both to meet the manifold needs of a modern society and relative to scientific advances in other fields. It is the purpose of this chapter to examine the manner in which health research is undertaken and supported in Canada, to determine how deficiencies might be remedied and to discuss how, in the future, an organizational framework could be established to ensure that adequate resources for research are made available on a continuing basis and used to achieve the goal of the best possible health care for Canadians.

## SPONSORSHIP OF HEALTH RESEARCH

Health research in Canada is sponsored by governments, voluntary organizations, foundations, business corporations, professional bodies, hospitals and universities.

The research carried out by business corporations primarily consists of drug research undertaken by the pharmaceutical industry. In Volume I of our Report we have discussed this industry in some detail.<sup>1</sup> Later in this chapter and in Chapter 5 we discuss the type of research which is related to the evaluation of the health of Canadians and the health services programmes that exist to meet these health needs. The discussion here is limited therefore to the sponsorship of medical and dental research (including drug research) that is carried out in universities, hospitals, foundations and other non-commercial organizations.<sup>2</sup>

The sponsorship of medical and dental research in Canada takes two forms: the conduct of research by government agencies and the provision of funds by governments, voluntary organizations and foundations for the support of research in universities, or in various hospitals and research institutions generally associated with universities. The major institutions involved in sponsoring medical or dental research in Canada are the Federal Government, provincial governments, voluntary organizations and foundations, and the National Institutes of Health of the United States.<sup>3</sup> The activities of these organizations are described below under the following headings: functions, types of research support, methods of application and administration of research grants.

### *Federal Government*

The Federal Government sponsors medical and dental research through the research it carries out itself (intramural research) and through its financial assistance for the support of research universities, hospitals and related institutions (extramural research). Intramural research is conducted

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<sup>1</sup> See Volume I, Chapters 16 and 17.

<sup>2</sup> For a more detailed discussion of medical research see MacFarlane, J. A., *et al.*, *Medical Education in Canada*, a study prepared for the Royal Commission on Health Services, Ottawa: Queen's Printer (*in press*). For a discussion of dental research, see Paynter, K. J., *Dental Education in Canada*, a study prepared for the Royal Commission on Health Services, Ottawa: Queen's Printer (*in press*).

<sup>3</sup> A number of other organizations in the United States and the United Kingdom also provide funds for health research in Canada. Among these are the National Foundation for Infantile Paralysis, Life Insurance Medical Research Fund, Sugar Research Foundation, Commonwealth Fund, Rockefeller Foundation and the Markle Foundation in the U.S.A., and the Nuffield Foundation, and the Wellcome Trust in the United Kingdom. Funds becoming available from these sources are comparatively small.

by the Department of National Health and Welfare and the Defence Research Board. Extramural research is supported through the Medical Research Council, the National Research Council, the Department of National Health and Welfare, the Department of National Defence, the Defence Research Board, the Department of Veterans Affairs and the Queen Elizabeth II Fund.

#### MEDICAL RESEARCH COUNCIL<sup>1</sup>

*Functions*—In 1960, the Medical Research Council was created to advise the Government of Canada on policy and matters relating to medical research and to administer funds allocated to it for the support of research, functions that previously had been the responsibility of the Division of Medical Research of the National Research Council. Although the Council still operates within the administrative framework of the National Research Council, for all intents and purposes it is an autonomous body with full responsibility for the conduct of its own programme. The public funds at the Council's disposal are provided annually through a parliamentary appropriation, and in allocating these funds the Council has full executive control. There are 15 members of the Council—all professional men active in medical education, research or in practice.

The Council has established no research units or research institutes; it employs no scientific and technical staff as such. It makes no allocations for any specific fields, but is prepared to support research in the broad field of medical science, being especially interested in continuing investigation. This support consists of grants-in-aid of research along with personnel support in the form of awards for training, and stipends for trained investigators who may work in universities.

*Grants-in-Aid*—The Council provides two main types of grants-in-aid of research, operating grants and major equipment grants supplemented by limited aid for travel. Operating grants-in-aid are available to members of faculties of Canadian universities and to scientists active in hospitals or employed in other recognized Canadian institutions. These grants are not intended to cover the entire cost of the research for which they are provided, since space and certain basic facilities at the institution are prerequisites to an application for a grant. A grantee is not permitted personal remuneration from a grant. The funds may be used to employ students (graduate and undergraduate) and other assistants (professional and non-professional), to purchase equipment and supplies required for the investigation, and for other authorized purposes such as travel related to the investigator's research programme.

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<sup>1</sup>Based on *Medical Research Council Extramural Programme*, Medical Research Council, Ottawa: Queen's Printer, revised, August 1964.



An award may be made in the form of an annual grant, a term grant which assures support for a definite period (usually three years), or a block grant which (either on an annual or a term basis) supports the activities of a group of associated investigators. Major equipment grants are offered for the purchase of units of special research equipment costing in excess of \$3,000, that could not be included in the items provided by an operating grant. These grants only provide assistance for the purchase of research equipment. They are not intended to equip new laboratories with general equipment or to provide tools for teaching, diagnosis or care of patients. In addition to the use of operating grant funds for travel, travel grants are available to Canadian medical scientists to enable them to visit laboratories for the purpose of furthering their research, and to cover the cost of attendance at meetings when such travel is initiated by the Council.

*Personnel Support*—The Council provides support for career research investigators in medicine at Canadian universities as research associates, as research scholars, and as visiting scientists. It makes provision for the training of research personnel through research fellowships, and summer undergraduate scholarships. As already indicated, undergraduates and graduate students may be employed also as research assistants under operating grants.

Medical research associateships are designed to stimulate medical research on a long-term basis and to provide continuing financial support for individuals of outstanding ability and training who wish to make medical research a full-time university career. Universities must undertake to provide adequate research facilities and to give the associate an academic rank in the appropriate faculty. Candidates must have a degree in medicine or a Ph.D. in a related science, and, under ordinary circumstances, should be less than 40 years of age. The initial appointment is for three years and can be renewed. In 1964 salaries ranged up to a maximum of \$16,720 per annum.

Medical research scholarships are designed to bridge the gap between the Council's associate programme (for the support of highly competent independent investigators) and its fellowship programme (for the provision of training and supervised experience in research). They are intended to provide support for the trained investigator who has shown promise of ability to initiate and carry out independent research. The sponsoring university must provide the successful candidate with an opportunity to develop and demonstrate such ability. In short, the scholar must not be obliged to carry out heavy teaching duties. The initial appointment is for a three-year period at a salary depending on the qualifications and experience of the successful candidate. The appointment may be renewed for a further period of two years, but in no case is a scholarship tenable for more than five years. To be eligible for appointment as a scholar, a candidate must have the M.D.



degree or the Ph.D. degree, or the equivalent, and be not more than 40 years of age at the time the application is made.

Medical research fellowships are designed primarily for training prospective research workers in the medical sciences. They are not awarded for the purpose of providing practical training and experience in the clinical or other branches of medicine. Candidates must be either graduates, with high standing in medicine or veterinary medicine, or holders of a Ph.D. degree in an appropriate field of science.<sup>1</sup> They must not be over thirty-five years of age at the beginning of tenure except under special circumstances. Fellowships are normally tenable at Canadian universities at stipends of \$3,000 to \$5,000; they are subject to three one-year renewals. Fellows with dependent children are given a \$500 supplement for the first child and a \$200 supplement for each additional child. Fellows are also paid a travel grant to enable them to reach the institution at which their award is tenable and to return home.<sup>2</sup>

Summer undergraduate scholarships are available to medical students to enable them to gain research training during the summer months. Two such scholarships, valued at \$1,000 each, are available for each Canadian medical school. Candidates must have completed their first medical year, and must rank in the upper 20 per cent of their class.

Visiting scientists' awards enable experienced investigators to work in Canadian laboratories. Up to three awards are made available each year for investigators in the medical sciences from abroad or for such investigators not normally resident in Canada. The awards are tenable for periods of not less than three and not more than twelve months, and are held in the various medical schools or their affiliated institutions. The maximum stipend is \$600 per month scaled in accordance with the qualifications and experience of the investigator.

*Administration and Assessment*—Applications for grants-in-aid of research are directed by the Secretary of the Medical Research Council to qualified referees through a panel or sub-committee for detailed study and recommendation to the Council. The Council has established Grants Sub-Committees in the four following areas of research: (i) biochemistry, (ii) physiology and pharmacology, (iii) bacteriology and pathology, and (iv) clinical investigation. Applications in fields other than these four are reviewed

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<sup>1</sup> It should be noted that although holders of the bachelor's degree who wish advanced training and experience in the basic medical sciences are not eligible for medical research fellowships, such candidates may apply to the National Research Council for bursaries or studentships.

<sup>2</sup> An additional allowance equal to two-thirds of the individual fare will be paid towards the travelling expenses of a married Fellow when accompanied by his wife. No allowance is made towards the cost of travel of children.

by two referees and a recommendation is made to the Council by a member of the executive. When an award is made, the funds are sent to the university in which the applicant is employed. Applications for medical research associateships and medical research scholarships are made on behalf of a prospective candidate by the president or principal of the university on the recommendations of the head of the department concerned and the dean of the medical faculty. Recommendations for appointments are made by a Selection Committee named by the Council. Applications for medical research fellowships are made by the candidates to the Council. Each applicant must arrange for his admission to a university laboratory or teaching hospital acceptable to the Council. Fellowships are awarded to the applicants who are deemed well qualified by the Council on the evidence submitted. Applications for summer undergraduate medical research scholarships are made available to the Dean of Medicine who selects, in consultation with members of his faculty, the winners of the awards in his school. Applications for visiting scientists' awards are made by the host university.

ASSOCIATE COMMITTEE ON DENTAL RESEARCH  
OF THE NATIONAL RESEARCH COUNCIL<sup>1</sup>

*Functions*—The Associate Committee on Dental Research of the National Research Council was established in March 1945 to: 1) stimulate research of interest to dental science among members of the dental faculties and among researchers in the basic and medical sciences; 2) co-ordinate dental research in Canada; 3) advance the application of research results in the interests of improved national dental health; 4) encourage close collaboration with other research organizations in problems of mutual interest.

To achieve these objectives, the Associate Committee provides grants-in-aid of research and support for personnel through awards for training, and stipends for trained scientists who may work in universities.

The Committee consists of 14 members; 6 representing the dental profession and 8 representing the basic sciences. The President of the National Research Council and one dental representative from each of the Departments of National Defence, National Health and Welfare, and Veterans Affairs, are members of the Committee which meets once a year.

*Grants-in-Aid*—Operating grants-in-aid of dental research projects are made to qualified persons who have access to the laboratory or clinical facilities required for the investigation. An award may be in the form of an

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<sup>1</sup>Based on National Research Council, *Associate Committee on Dental Research Extramural Programme*, Ottawa: Queen's Printer, September 1962.

annual grant, a term grant which assures support for three years, or a block grant on either an annual or a term basis. Term grants are not renewable, i.e., a new application must be submitted at the end of a given term. Major Equipment Grants are provided for the purchase of items of research equipment the cost of which will exceed \$5,000 and could not be included under an operating grant.

*Personnel Support*—The Committee provides support for career investigators in Canadian universities as dental research associates, dental research scholars and visiting scientists, and for the training of research workers through graduate dental research fellowships, and summer undergraduate dental research scholarships.

Dental research associateships are open to individuals of outstanding ability and training who wish to make research a full-time university career. The sponsoring university must undertake to supply research facilities and adequate accommodation, and give the investigator an appropriate academic rank on the staff of the dental school. The initial appointment is for a two-year period; it may be renewed for five-year periods. To be eligible for such an appointment, a candidate must have a degree in dentistry or a Ph.D. in a related science and be under 40 years of age. The initial salary of an associate will depend upon his academic training and experience. Dental research scholarships are designed to provide support for the trained investigator who has shown promise of ability to initiate research and carry it out independently. The sponsoring university must give the investigator an opportunity to develop and demonstrate this ability without the obligation of engaging in a heavy teaching programme. The first appointment is for a three-year period at a salary depending on qualifications and experience, ranging from \$6,000 to \$9,000 per annum. A single renewal for a period of two years is permissible. But generally, the expectation is that the experience gained by the scholar will fit him for promotion to the rank of dental research associate.

Graduate dental research fellowships are awarded to applicants who are deemed well qualified for advanced training and experience in research in dental and associated sciences. To be eligible for a first award, an applicant must not be over 30 years of age at the beginning of tenure which is for one year; renewals are considered, but in no case are more than three renewals granted. Fellowships are normally tenable at Canadian universities at stipends from \$3,000 to \$5,000. Small supplements are provided for Fellows who have dependent children and for travelling expenses to enable them to reach the laboratory at which their award is tenable.

Summer undergraduate dental research scholarships, valued at \$1,000 each, are available for research training during the summer months for two high-ranking students in each Canadian dental school.



A visiting scientists' award is made available each year to enable an experienced investigator to work in a Canadian laboratory. The award is tenable for periods of not less than three and not more than twelve months, at a stipend not more than \$600 per month.

*Administration and Assessment*—All applications received by the Associate Committee on Dental Research are reviewed and assessed by competent referees. Applications for grants-in-aid of research are proposed by investigators holding appointments at Canadian universities. Applications for dental research associateships, dental research scholarships and visiting scientist awards are made by a university, on the recommendation of the head of the department concerned and the Dean of the Dental Faculty. Applications for a fellowship are made by the candidate directly to the Associate Committee. Applications for summer undergraduate scholarships are made to the Dean of the Dental School who selects, in consultation with members of his faculty, the winners of the awards in his school. Funds for all Associate Committee awards for grants-in-aid of research and salary payments for investigators are made through the business office of the university. Fellowship awards are paid directly to successful candidates.

#### THE DEPARTMENT OF NATIONAL HEALTH AND WELFARE

*Extramural Research*—The extramural research programme of the Department of National Health and Welfare can be described as follows:

The Department of National Health and Welfare assists surveys and experimental investigations designed to obtain valid information and to develop methods which are likely to have practical application for improving the health of the Canadian people. Specific objectives related to recognized public health, and medico-social problems are favoured. The major areas in which studies are undertaken include:

- (a) the prevention of disease and disability;
- (b) the promotion of health and physical fitness;
- (c) the etiology and epidemiology of disease, including field studies;
- (d) the diagnosis and treatment of disease, including evaluation of results being achieved;
- (e) rehabilitation.

This programme is implemented through grants-in-aid of research conducted in universities, hospitals and other research institutions from funds provided under the National Health Grants Programme.<sup>1</sup> National Health Grants are made available in a fixed amount each year to the provinces

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<sup>1</sup> For a discussion of the role of the National Health Grants in the support of Health Research, see Volume I, Chapters 2 and 10, pp. 88-91 and 405.



and territories to assist them in the development, improvement and extension of health services. A portion of these grants may be used for research. Additionally there is a Public Health Research Grant, which is not allotted in specified amounts to provinces, but for which applications are received from investigators in any province.

The Department does not directly offer fellowships for training in health research, but such training may be assisted under the Hospital Insurance and Diagnostic Services Act,<sup>1</sup> the National Physical Fitness and Amateur Sport Act and under Welfare Grants administered by the department.

All applications for research assistance through the Health Grants Programme originate with a sponsoring agency such as a university, a research institute, a local or provincial health department, a hospital or a voluntary agency. They are submitted to the provincial department of health in the province where the work is to be done and, if approved, are forwarded to the Health Grants Administration in Ottawa from whence they proceed through the principal Medical Officer for Research Development or a consultant division of the Department of National Health and Welfare, to one or more non-departmental experts for appraisal, to financial and administrative officers, to a specialized sub-committee, to a research advisory committee, and finally back to provincial health departments for formal notice to the sponsoring agency concerned, regarding approval or rejection. The agency in turn notifies the principal investigator, i.e., the person who is actively responsible for the research. Ordinarily grants-in-aid are made on an annual basis, but by agreement between the Department and the province concerned, a term grant may be made available. The purpose of term assistance is to provide the personnel on a research project with assurance of continuity of support at an agreed level for each of a specified number of years, generally three, and to simplify administrative arrangements.

*Intramural Research*—The intramural research of the Department is carried out through its laboratories, divisions and directorates and Research and Statistics Division with the various divisions and directorates carrying out research related to the specific area of their service. All aspects of these programmes are co-ordinated by the Research Development Section. The largest share of the research budget is spent by the Food and Drug Directorate which carries out basic research on foods and drugs and develops analytical procedures and methods for enforcement purposes. The Laboratory of Hygiene conducts research in public health and clinical laboratory fields;

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<sup>1</sup> Regulations under the Hospital Insurance and Diagnostic Services Act preclude the direct costs of staff, supplies and equipment devoted wholly or mainly to research, but permit the cost of research which is incidental to normal hospital activities. Such activities include the intensive investigation required by certain patients.

it has six scientific sub-sections, namely bacteriology, virus, clinical, biochemical research, biologicals control and zoonosis.<sup>1</sup> The Research and Statistics Division<sup>2</sup> of the department assists in the research programmes of other divisions and studies the social and economic aspects of health and health services.

The intramural research programme of the Department of National Health and Welfare is not subject to outside assessment; "individual projects are passed upon by groups of departmental officials without any independent advice from outside the public service".<sup>3</sup>

#### DEFENCE RESEARCH BOARD<sup>4</sup>

The Defence Research Board supports both intramural and extramural research programmes. Health research is carried out intramurally in its own establishment at Downsview, Ontario, and extramurally in Canadian universities by means of a grant-in-aid programme. In addition, research units have been established in four universities: The Arctic Medical Unit at the University of Manitoba, the Radiobiology Unit at the University of Toronto, the Psychiatry Unit at the University of Ottawa, and the Aviation Medicine Unit at McGill University. Occasionally the Board offers a fellowship for training in research.

Applications for assistance towards research projects must be related to health and its maintenance in the Armed Services. The fields of research that are of foremost interest to the Board are: aviation and naval medical research, radiation protection and treatment, nutrition, auditory and vestibular research, visual problems, epidemiology, shock and plasma expanders, management of burns and wounds, infection and immunity, arctic medical research, psychiatry, toxicology, blood and related problems. In each of these fields a panel of experts drawn from all parts of Canada is appointed to review applications for grants. No similar procedure is applied to the Board's own intramural research programme.

#### THE DEPARTMENT OF VETERANS AFFAIRS<sup>5</sup>

The Department of Veterans Affairs maintains a programme of clinical research in its hospitals and clinics across Canada. The programme

<sup>1</sup> Based on Department of National Health and Welfare, *Annual Report for the Fiscal Year ended March 31, 1963*, Ottawa: Queen's Printer, 1963; and *The Federal and Provincial Health Services in Canada*, Second Edition, Toronto, Canadian Public Health Association, 1962, pp. 6-17.

<sup>2</sup> See also Chapter 5 for a discussion of the statistical services provided by this Department and the Dominion Bureau of Statistics.

<sup>3</sup> *Report of The Royal Commission on Government Organization*, Vol. 3, Ottawa: Queen's Printer, 1962, p. 235.

<sup>4</sup> MacFarlane, J. A., et al., *Medical Education in Canada*, op. cit., Chapter 10.

<sup>5</sup> *Ibid.*

is varied but in the main it deals with conditions affecting aging, such as arthritis and arteriosclerosis, which the department is in a special position to investigate.

Over three-quarters of the department's research budget is used in support of applications which come from staff members, who conduct investigations in the wards and laboratories of the departmental hospitals. It should be noted that professional staffs of D.V.A. hospitals are employed on a part-time basis; most members of the medical staff are engaged in teaching and private practice, and hold appointments on the medical faculties of the various universities. The remainder of the budget is used to support the five self-contained clinical investigation units located in active treatment hospitals at Montreal, Toronto, London, Winnipeg and Vancouver.

Applications for research support are considered by the Advisory Board on Medical Research and Education, a group drawn from departmental officials, non-departmental officials and from scientists outside the public service. Awards are made on both an annual and term basis.

#### QUEEN ELIZABETH II FUND FOR RESEARCH INTO DISEASES OF CHILDREN

This fund, established by the Federal Government in 1959 with a capital of \$1 million, yields a fixed sum per annum which is spent on fellowships for training research personnel and on salaries for the maintenance of trained scientists in the field of child care. All applications for support are approved by the Board of Trustees, acting on the advice of medical reviewers.

#### *Provincial Health Agencies*

In varying degrees health research is carried out by provincial governments in connection with the activities of their health departments, particularly the provincial laboratories and provincial hospital insurance programmes. Three of the provincial health departments have separate administrative units to deal generally with matters of health research and statistics.<sup>1</sup>

Apart from this intramural research incidental to the functions and activities of the departments concerned, there are provincial agencies such as the Alcoholism and Drug Addiction Research Foundation and the Ontario Cancer Treatment and Research Foundation which provide grants and fellowships for extramural research in their respective fields.

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<sup>1</sup>In Ontario the Division of Medical Statistics, in Saskatchewan the Research and Statistics Branch, and in British Columbia the Vital Statistics Division which provides statistics for all divisions of the Health Branch of the Department.



### *Voluntary Organizations and Foundations*

A number of voluntary agencies and foundations include among their principal objectives the encouragement and support of health research.<sup>1</sup> Among them are the National Cancer Institute (which at the time of its creation in 1947 entered into close collaboration with the pre-existing (1938) Canadian Cancer Society);<sup>2</sup> the Canadian Arthritis and Rheumatism Society; the Multiple Sclerosis Society of Canada; the Canadian Diabetic Association; the Muscular Dystrophy Association of Canada; the Canadian Heart Foundation (which is a federation of six provincial heart foundations and an Atlantic Provinces Division); the Canadian Association for Retarded Children; the Canadian Cystic Fibrosis Association; the Canadian Hemophilia Society and the newly formed Rehabilitation Foundation for the Disabled. It is noteworthy that the older organizations such as the Canadian Tuberculosis Association, the Canadian Mental Health Association and the Canadian Council for Crippled Children and Adults recently have taken an increasing part in supporting research. Other organizations which assist health research are the Banting Research Foundation, the J. P. Bickell Foundation, the Atkinson Charitable Foundation, the Canadian Life Insurance Officers Association, the National Sanitarium Association, the Picker Foundation, fraternal societies and service clubs.

Voluntary agencies and foundations promote research through selected projects in universities, hospitals and other research centres, provide training fellowships, and construct and purchase research facilities and equipment. Grants-in-aid of research and fellowships are made on the advice of the agency's Advisory Medical Committee comprising leaders in academic and scientific medicine.<sup>3</sup> It is interesting to note that applications for support of research in specific areas such as heart, cancer, arthritis, etc., which are directed to government health-supporting agencies are referred to the advisory bodies of the relevant voluntary agencies for scientific assessment. This provides a high degree of co-ordination between the public and private agencies which support health research in this country. In addition, representatives of governmental and voluntary research fund-granting bodies

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<sup>1</sup> See Chapter 6, and particularly Table 6-9.

<sup>2</sup> As a consequence of an affiliation agreement, the Canadian Cancer Society assigned to the National Cancer Institute major responsibility for the co-ordination and maintenance of research activities in the field of cancer.

<sup>3</sup> Each agency and foundation has its own medical and scientific advisory body which assesses research applications and makes recommendations to the governing members of the agency or foundation. Although such bodies vary in size, they usually include recognized medical and scientific specialists drawn from the universities, departments of health and other government agencies concerned with health. Thus, the Canadian Arthritis and Rheumatism Society's "Committee on Research and Professional Education" comprises eight experts in medicine from the universities and elsewhere. It should be noted that there is some interlocking membership among the scientific advisory groups of voluntary agencies.



meet in January of each year to co-ordinate their programmes.<sup>1</sup> This gathering is held in conjunction with the monthly meeting of the "Interdepartmental Medical Research Co-ordinating Group", an informal and unofficial body consisting of representatives from the Department of National Health and Welfare, the Defence Research Board, the Department of Veterans Affairs and the Medical Research Council. Although of an informal character, it is clear that such liaison is very useful in that it permits a closer examination of possible duplication of research support and also reveals relationships between total research funds and the problems of health and disease that weigh heaviest on Canadians.

Under the grants-in-aid, no payment is made to the principal investigator. The money is deposited with the institution where the work is to be done and administered by the appropriate controlling officer. Most grants provide support for one year's work and the scientist must apply each year for a renewal for as long as is necessary to complete the project. Fellowships are awarded to post-doctoral candidates preparing themselves for careers in research, or as specialists in a particular field. Candidates are required to secure their admission as graduate students at academic departments or laboratories approved by the agency, and fellowship stipends are paid directly to successful candidates.

### *Foreign Agencies*

Funds supplied by the United States Public Health Service through its National Institutes of Health recently have provided substantial support for health research carried out in Canada. The NIH sponsor research projects in Canadian universities and other centres across the country and provide training fellowships. Financial support from private sources in the United States or the United Kingdom now is relatively limited.

## EXPENDITURES ON HEALTH RESEARCH

It is difficult to obtain complete and fully comparable data on the total amount spent on health research in Canada. This is particularly the case with data relating to some agencies and to the proportion of the budgets of

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<sup>1</sup> The following fund-granting voluntary bodies attended the January, 1964, meeting of the Interdepartmental Medical Research Co-ordinating Group: The Canadian Heart Foundation, Canadian Life Insurance Officers Association, Canadian Association for Retarded Children, Canadian Arthritis and Rheumatism Society, Canadian Tuberculosis Association, Canadian Rehabilitation Council for the Disabled, Ontario Addiction Research Foundation, Muscular Dystrophy Association, Multiple Sclerosis Society, National Cancer Institute, and the National Research Council Associate Committee on Dental Research.

universities spent on health research over and above that provided through grants. The percentage of a professor's time applied to research, and the proportion of their departmental budgets and university overhead spent on research are impossible to estimate with any precision. Again, it is not practical to separate all expenditures on clinical research or on the evaluation of health services included in the costs of hospital and medical insurance programmes. Expenditures of this type while an essential part of a research programme are not covered in the data that follow.

### *Federal Expenditures*

The Federal Government through its various agencies has increased its support for health research in recent years. The growth of support for intramural and extramural research is summarized in Tables 4-1 and 4-2.

Between 1949-50 and 1961-62 federal expenditures on intramural research rose from \$110,000 to \$2,942,000. In 1962-63 there was a decline in such expenditures to \$2.75 million. Even then, intramural expenditures increased over twenty-four fold in the 14-year period.

**TABLE 4-1** FEDERAL SUPPORT FOR INTRAMURAL HEALTH RESEARCH  
BY DEPARTMENTS, FISCAL YEARS 1949-1962

(thousands of dollars)

Fiscal Year	Department of National Health and Welfare	Defence Research Board	Total
1949-50.....	—	—	110
1952-53.....	—	—	1,060
1955-56.....	—	—	1,170
1956-57.....	863	—	—
1957-58.....	947	—	—
1958-59.....	1,182	—	—
1959-60.....	1,656	—	—
1960-61.....	1,678	—	—
1961-62.....	1,792	1,150	2,942
1962-63.....	1,761	990	2,751

— indicates that data are not available.

SOURCE: Layton, B.D.B., "Financing Medical Research in Canada", *The Canadian Medical Association Journal*, 76, 1957, p. 536; Department of National Health and Welfare, *Annual Report*, various editions; and information supplied by the Defence Research Board.

Between 1946-47 and 1961-62, total federal support for extramural research increased from \$158,000 a year to \$7,757,000 and rose still further to \$8.3 million in 1962-63 as shown in Table 4-2.

**TABLE 4-2** FEDERAL SUPPORT FOR EXTRAMURAL HEALTH RESEARCH,  
FISCAL YEARS 1946-1962

(thousands of dollars)

Year	National Research Council*	Department of National Health and Welfare	Defence Research Board	Department of Veterans Affairs	Total
1946-47.....	158	0	0	0	158
1947-48.....	271	0	0	0	271
1948-49.....	357	150	40	0	547
1949-50.....	498	326	113	0	937
1950-51.....	539	720	179	1	1,439
1951-52.....	578	959	542	0	2,079
1952-53.....	617	1,248	357	2	2,224
1953-54.....	642	1,639	380	356	3,017
1954-55.....	652	1,600	365	367	2,984
1955-56.....	693	1,554	404	352	3,003
1956-57.....	849	1,740	419	375	3,383
1957-58.....	894	1,937	373	383	3,587
1958-59.....	1,523	2,000	409	303	4,235
1959-60.....	1,970	2,640	414	328	5,352
1960-61.....	2,300	3,600	448	331	6,679
1961-62.....	3,285†	3,481	450	359	7,575
1962-63.....	4,083†	3,368	447	409	8,307

\*Excludes National Research Council Dental Research awards.

†Through the Medical Research Council.

SOURCE: Based on MacFarlane, J. A., *et al.*, *Medical Education in Canada*, a study prepared for the Royal Commission on Health Services, Chapter 10, Ottawa: Queen's Printer (*in press*).

Total federal expenditures for health research, as shown in Table 4-3, rose from \$1 million in 1949-50 to \$10.7 million in 1961-62, an increase of over tenfold. In 1962-63, total expenditures had reached \$11.3 million of which \$8.5 million was for extramural research (73 per cent) and \$2.8 million for intramural research (27 per cent).

**TABLE 4-3** TOTAL FEDERAL SUPPORT FOR HEALTH RESEARCH,  
FISCAL YEARS 1949, 1961 AND 1962

(thousands of dollars)

Year	Intramural	Extramural	N.R.C. Dental Research	Queen Elizabeth II Fund	Total
1949-50.....	110	937	0	0	1,047
1961-62.....	2,942	7,575	132	24	10,673
1962-63.....	2,751	8,307	178	52	11,288

SOURCE: Based on Tables 4-1 and 4-2.

**TABLE 4.4 GRANTS-IN-AID AND RESEARCH FELLOWSHIPS AVAILABLE THROUGH PROVINCIAL AGENCIES AND VOLUNTARY ORGANIZATIONS AND FOUNDATIONS, CANADA, 1961-1962**

Sponsor	1961						1962					
	Grants-In-Aid		Fellowships		Total		Grants-In-Aid		Fellowships		Total	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Provincial Agencies:												
Ontario Addiction Research Foundation	10	66,720	—	—	10	66,720	3	17,891	—	—	3	17,891
Ontario Cancer Treatment Research Foundation	38	239,406	7	45,500	45	284,906	38	337,617	7	50,000	45	387,617
Sub-Total	48	306,126	7	45,500	55	351,626	41	355,508	7	50,000	48	405,508
Voluntary Organizations and Foundations:												
Canadian Heart Foundation	99	661,507	52	336,600	151	998,107	111	759,728	52	369,450	163	1,129,178
National Cancer Institute	84	1,201,828	—	51,962	84	1,253,790	89	1,447,245	16	48,950	105	1,496,195
Canadian Arthritis and Rheumatism Society	15	110,020	16	69,164	31	179,184	17	90,801	17	85,275	34	176,076
Muscular Dystrophy Association	25	226,381	12	53,441	37	279,822	26	236,772	14	59,175	40	295,947
Atkinson Charitable Foundation	4	128,981	—	—	4	128,981	5	81,044	—	—	5	81,044
J. P. Bickell Foundation	7	65,000	—	—	7	65,000	3	22,640	—	—	3	22,640
Multiple Sclerosis Society	9	65,423	1	4,600	10	70,023	9	62,289	3	7,900	12	70,189
Canadian Life Insurance Officers Association	—	36,100	14	79,999	14	116,099	—	22,900	13	67,920	13	90,820
National Sanitarium Association	6	32,400	—	—	6	32,400	7	39,155	—	—	7	39,155
Pickers Foundation	2	7,950	—	—	2	7,950	2	11,100	—	—	2	11,100
Canadian Mental Health Association	2	11,250	—	—	2	11,250	4	21,875	—	—	4	21,875
Banting Research	18	59,760	—	—	18	59,760	17	57,513	—	—	17	57,513
Sub-Total	271	2,606,600	95	595,766	366	3,202,366	290	2,853,062	115	638,670	405	3,491,732
Total	319	2,912,726	102	641,266	421	3,553,992	331	3,208,570	122	688,670	453	3,897,240

SOURCE: Based on MacFarlane, J. A., *et al.*, *Medical Education in Canada*, a study prepared for the Royal Commission on Health Services, Chapter 10, Ottawa: Queen's Printer (*in press*).



*Provincial and Voluntary Organizations and Foundations*

Data are not available to indicate trends in expenditures of provincial and voluntary organizations and foundations on health research. Table 4-4 shows these expenditures for 1961 and 1962.

Provincial agencies and voluntary organizations increased their financial support of health research from \$3.6 million to \$3.9 million or by 9.7 per cent between 1961 and 1962. During the same period provincial support increased by 15 per cent and, as a consequence, the share of the latter in total health expenditures of provincial and voluntary organizations rose from 9.9 to 10.4 per cent.

*National Institutes of Health*

As already indicated, Canadian research workers have for some time received funds from the United States Public Health Service through grants from its National Institutes of Health. The contribution of these institutes to health research in Canada can be seen from an examination of Table 4-5. It will be noted that until 1958 such funds were quite minor. Since that

**TABLE 4-5 SUMMARY OF UNITED STATES PUBLIC HEALTH SERVICE—NIH GRANTS TO CANADA, FISCAL YEARS 1954-1964**

Awarded in Fiscal Year	Amount	Number of Grants
	\$	
1954.....	9,671	1
1955.....	9,670	1
1956.....	9,670	1
1957.....	16,449	2
1958.....	71,169	5
1959.....	180,807	11
1960.....	559,543	23
1961.....	649,465	38
1962.....	1,504,765	67
1963.....	2,311,143	125
1964.....	599,759	32
Total awarded.....	5,922,111	306
Committed for Award in Fiscal Year		
1964.....	995,603	51
1965.....	784,717	41
1966.....	355,490	14
Total committed for award.....	2,135,810	106

SOURCE: Communication from the Canadian Embassy, Washington, D.C., to the Secretary of State for External Affairs, March 26, 1964.

date they have grown rapidly and by 1963 amounted to \$2.3 million. Table 4-5 also indicates the reduction in the National Institutes of Health support of Canadian health research in 1964. Such support is being gradually cut back as the National Institutes of Health reduce their grants to developed countries.<sup>1</sup> Canadian medical scientists have argued that from the standpoint of continued scientific collaboration between the two countries, the PHS-NIH programme in Canada should not be reduced below \$1.2 million per annum.<sup>2</sup> In any case, it is clear that a substantial reduction in PHS-NIH grants to Canadian investigators unless offset by increased Canadian funds would have a serious effect on research activity in Canada.

### *Total Health Research Expenditures*

Table 4-6 shows the magnitude of total expenditures on health research, by source of funds, in Canada, for the years 1961 and 1962.

**TABLE 4-6 TOTAL EXPENDITURES\* ON HEALTH RESEARCH, BY SOURCE OF FUNDS, CANADA, 1961 AND 1962**

(millions of dollars)

Source of Funds	1961	1962
Federal Government†.....	10.2	11.0
Intramural Research.....	2.9	2.8
Extramural Research‡.....	7.3	8.2
Provincial Agencies <sup>a</sup> .....	0.3	0.4
Voluntary Organizations.....	3.2	3.5
United States National Institutes of Health <sup>b</sup> .....	1.4	1.6
Total.....	15.1	16.5

\*Includes both grants-in-aid of research and fellowships.

†In the case of the Federal Government adjustments were made to convert data from a fiscal year basis to a calendar year basis.

‡Includes an estimated \$130,000 and \$150,000 for dental research in 1961 and 1962 respectively.

<sup>a</sup>Province of Ontario.

<sup>b</sup>Estimates adjusted to a calendar year basis.

SOURCE: Based on Tables 4-3, 4-4 and 4-5.

<sup>1</sup> Communication from the Canadian Embassy, Washington, D.C., to the Secretary of State for External Affairs, March 26, 1964.

<sup>2</sup> This view was the consensus of a meeting held in Ottawa on February 26, 1964, between Mr. Robert H. Grant, Deputy Director of the Office of International Research of the United States Public Health Service, and members of the Medical Research Council and its four grants subcommittees. (Information supplied by the Department of External Affairs, Canada). It should be recognized that offsetting the inflow of American research funds is an outflow of Canadian research workers and physicians and surgeons to the United States, whose costs of education and training are borne largely by Canada.

Total expenditures on health research increased from \$15.1 million to \$16.5 million or by 9.3 per cent between 1961 and 1962. In 1962 the Federal Government provided 66 per cent of this amount, voluntary organizations and provincial agencies 24 per cent, and U.S. National Institutes of Health 10 per cent. Considering expenditures excluding Federal Government intramural research expenditures which amounted to \$13.7 million in 1962, the Federal Government accounted for 60 per cent, voluntary organizations and provincial agencies for 28 per cent, and the National Institutes of Health for 12 per cent.

### THE INADEQUACY OF SUPPORT FOR HEALTH RESEARCH IN CANADA

There is general agreement that health research in Canada has developed remarkably within the last generation; that Canadian scientists have done distinguished work; that the conduct of health research has broad implications for the well-being of mankind; but that health research in Canada is failing to keep pace with the opportunities now available in the medical and health-related sciences and the obligations arising from the need to expand the supply of physicians, dentists and other health personnel. Despite a steady and substantial increase in the amount of money available for health research—both from government granting bodies and from voluntary organizations—available funds lag behind the amounts needed for the support of research.

The possibility of a gap between the funds and facilities available for research and the needs of medical research in Canada was examined in 1959 by The Special Committee Appointed to Review Extramural Support of Medical Research by the Government of Canada, under the chairmanship of Professor R. F. Farquharson. The Committee concluded that such a gap existed as a consequence of a number of factors that had characterized the post-war period.<sup>1</sup>

The first factor was the growth in the number of scientific personnel associated with existing medical schools which increased their needs for research support. The second factor was the establishment of two new medical schools and the expansion of a third into a full four-year course. These developments added to the supply of medical scientists, to the growth of scientific activities, and to the demand for research assistance. The third factor was that research had become more costly due to the development and use of sophisticated and very expensive research tools and inflationary pressures which had significantly increased the cost of equipment, salaries of technicians and other operating expenses. A fourth factor was the inadequacy

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<sup>1</sup> *The Farquharson Report, op. cit., pp. 5 and 6.*



of laboratory space for research. A fifth and fundamental factor was the high rate of scientific development in the field of medicine which occurred over the past two decades. Knowledge is contagious. Increased research leads to increased discovery. Increased discovery reveals many new problems which require investigation. In other words, the remarkable acceleration in the pace of the growth of new knowledge and in its application created new opportunities and obligations for research.

Since 1959 there has been considerable increase in the amount of funds made available for the support of research by the Federal Government, voluntary organizations and foundations, as well as the National Institutes of Health. Federal support for research, both intramural and extramural, doubled between 1958-59 and 1962-63. Grants from the National Institutes of Health rose from barely \$0.2 million to over \$2 million. Grants from voluntary organizations also increased. There has also been an expansion in the facilities for research as some existing universities added to space available. Yet deficiencies still continue to exist. Funds are still not sufficient to provide support for personnel, and facilities are inadequate even for the personnel available.

### *Shortages of Personnel and Facilities*

The exact extent to which the funds available for the support of personnel now engaged in health research fall short of meeting the demands for such funds is difficult to say. Although evidence exists that indicates a gap between the demand for and supply of funds, the size of this gap is not easily expressed in quantitative terms. For example, there is information indicating that the amounts requested by research workers exceed the amounts granted by various granting bodies but the information is incomplete. In the first place, not all applicants for assistance may reach the standards required by the granting body. All applicants for fellowship assistance may not deserve appointment. Secondly, unsuccessful applicants to one granting body may receive assistance from some other source including the National Institutes of Health. Unfortunately, data are not available that would permit the elimination of duplicate applications and to assess the true shortages.<sup>1</sup> What can be said though is that qualified research workers believe that more funds could be spent usefully and without waste.<sup>2</sup>

The trends in the awarding of research assistance are evident in Tables 4-7 and 4-8. Bearing in mind the limitation of the data, Table 4-7

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<sup>1</sup>The available data relate to Canadian granting bodies only. Canadian research workers also receive assistance from the National Institutes of Health.

<sup>2</sup>National Research Council of Canada, *Forty-sixth Annual Report 1962-1963*, Report of Chairman of Medical Research Council, Toronto: University of Toronto Press, 1963, p. 36, "Since the funds available are usually much less than the funds applied for . . . the initial recommendations must often be reduced".



indicates that the number of research grants awarded by the Medical Research Council has increased recently but that the proportion of applicants receiving grants declined.

**TABLE 4-7** SUMMARY OF GRANTS REQUESTED AND AWARDED BY MEDICAL RESEARCH COUNCIL, FISCAL YEARS 1961-62 TO 1963-64

Grants Requested and Awarded	1961-62	1962-63	1963-64
Total requested for grants.....	\$3,719,342	\$4,883,392	\$6,089,697
Number of grants awarded.....	370	444	495
Value of grants awarded.....	\$2,697,077	\$3,459,273	\$3,971,273
Percentage of requests met.....	72	71	65
Number of requests rejected <i>in toto</i> .....	43	69	115
Value of requests rejected <i>in toto</i> .....	\$342,625	\$574,138	\$1,088,414

SOURCE: Data supplied by the Medical Research Council.

Graduate research fellowships constitute the most common means of financial support for the training of investigators in the health sciences. As indicated in Table 4-8, unlike the grants awarded by the Medical Research Council, the proportion of fellowships awarded is increasing, amounting to 76 per cent in 1963. In the case of the National Cancer Institute and the Canadian Heart Foundation, a high proportion of fellowships were awarded, 89 and 84 per cent respectively in 1963. The over-all proportion of fellowships awarded rose from 70 per cent in 1961-62 and 1962-63 to almost 80 per cent in 1963-64.

As already indicated, the Medical Research Council provides 24 summer undergraduate scholarships, each with a value of \$1,000. Applications in 1962 numbered over 100, indicating the shortage that existed in this area.

It is generally agreed that there is no person more worthy of support in health research than the investigator who has demonstrated his ability to conduct original and sustained research. Indeed, it seems fair to say that progress and discovery in the field of medicine can be correlated roughly with the number of such researchers working in universities, hospitals or special research organizations. By 1962-63, an all-time high of 29 research associates had been appointed.<sup>1</sup>

<sup>1</sup> Data obtained from the Medical Research Council.

**TABLE 4-8 SUMMARY OF FELLOWSHIPS REQUESTED AND AWARDED  
BY SELECTED AGENCIES, 1961-1963\***

Agency	1961		1962		1963	
	No.	Amount	No.	Amount	No.	Amount
		\$		\$		\$
Medical Research Council						
Fellowships Requested.....	94		103		108	
Fellowships Approved.....	53		60		82	
Percentage Approved.....	56		58		76	
National Cancer Institute						
Fellowships Requested.....	16	79,750	19	90,800	18	91,750
Fellowships Approved.....	13	63,304	15	59,650	16	74,850
Percentage Approved.....	81	79	79	66	89	82
Canadian Heart Foundation						
Fellowships Requested.....	60	400,500	58	419,950	50	383,015
Fellowships Approved.....	52	336,600	52	356,200	42	280,100
Percentage Approved.....	87	84	90	85	84	73

\*Medical Research Council data relates to 1960-61, 1961-62, 1962-63; Cancer Institute to 1961, 1962, 1963; Heart Foundation to 1961-62, 1962-63, and 1963-64.

SOURCE: Based on data supplied by the Medical Research Council, National Cancer Institute and the Canadian Heart Foundation.

It has sometimes been suggested that another piece of evidence indicating a shortage of research funds in Canada is the difference between the average amount of financial assistance provided to Canadian research workers compared with those in the United States. The data again are limited but they do indicate that American scientists received considerably larger average grants than Canadian scientists.<sup>1</sup>

Such a differential, from the point of view of research manpower, would be significant if it could be demonstrated that these differentials, or the

<sup>1</sup> The basic stipend for a Research Fellow of the Medical Research Council is \$3,000 per annum; the maximum he may receive with five or more further years of training is \$5,000. Since 1961, Fellows with dependent children are given a \$500 supplement for the first child and a \$200 allowance for each additional child. In the United States the National Institutes of Health provide post-doctoral fellowships for early post-graduate training. These fellowships range from \$4,500 to \$5,500 per annum; they have allowances for dependents (\$500 for each) and for tuition. For subsequent training of medical investigators and to support those who need further experience to qualify for senior positions, the National Institutes of Health provide research career development awards. These awards are made for initial periods of five years and may be renewed to provide a total period of support of not more than ten years. The maximum salary an awardee may receive is \$25,000 per annum. Medical research associateships are comparable in purpose to the "research career" awards of the National Institutes of Health. The latter, however, involves salaries up to \$25,000 per annum while the upper limit of the former is \$16,720 per annum. While there are some differences in the cost of living between the two countries, such differences are considerably less than the variations in stipends made available to scholars in the U.S. and in Canada, as indicated above.

shortage of research funds generally, did lead to losses of medical and dental scientists to the United States. How far this has been the case is difficult to say. Certainly, Canadian scientists have migrated to the United States but part of this loss has been offset by the inflow of scientists from other countries and the free flow of health information between countries.<sup>1</sup> It is true that monetary awards, on the average, are lower in Canada but it must be recognized that differences in living costs between Canada and the United States offset some of the differentials. The differences that remain reflect the higher income levels that prevail in the United States. These differentials have persisted over a very long period of time and are likely to persist in the immediate future. It is probably correct that it is only when differentials increase that the outflow of personnel becomes significant for this reason.

The deficiency in the field of health research is not so much the shortage of funds to provide qualified research workers with the support they require, although there is a shortage of such funds, but a shortage of qualified research personnel. This may be due to a loss of staff to the United States but is more clearly associated with the failure to develop a national manpower policy for the expansion of the supply of Canadian-trained physicians and dentists. If the appropriate facilities for training physicians and dentists had been made available the supply of potential research personnel would also have expanded as university teachers combined teaching and research in the health sciences. The outflow of this expanded programme in turn would have partly provided the manpower for health research over the next decade.

The shortages of personnel thus have been related to the shortages of research facilities in medical schools and teaching hospitals. Clinical research facilities have been limited while the older medical schools provided few facilities beyond those needed for teaching.<sup>2</sup> The extent of the need in this area can be determined from the memorandum prepared by the Associa-

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<sup>1</sup> This is another example of the shortcomings of the statistics relating to the migration of professional personnel which increase the difficulty of planning health programmes in Canada. A rough estimate of the outflow of biomedical research workers from Canada to the United States has been made by Dr. K. M. West. He estimates that an average of 45 such research personnel emigrate to the United States each year. West, K. M., "Training for Medical Research: The World Role of the United States", *The Journal of Medical Education*, March, 1964, p. 256. On the other hand, Canadian graduates receive advanced research training in the United States—much of it by way of American government grants—and then return to Canada. Information is not available to assess the size of the long-term net flow of medical researchers between the two countries. This statistical gap of information vital for health research planning should be filled as the programme for comprehensive health statistics, outlined in Chapter 5, is implemented.

<sup>2</sup> *The Farquharson Report, op. cit.*, p. 5. "The buildings originally erected for the use of the older medical schools were designed for teaching, with little provision for research. Many of these are still in use; research is conducted in meagre quarters, in laboratories designed for teaching or even in corridors."



tion of Medical Colleges as a basis for discussion with the Honourable Gordon Churchill, Chairman of the Privy Council Committee on Scientific and Industrial Research, in late 1962.<sup>1</sup> As of November 26, 1962, a survey of the needs for new construction of medical schools and teaching hospitals associated with such schools indicated that the cost of the required building programme would amount to \$190 million over the period 1963 to 1971, of which \$57.8 million would be for research. Of the \$190 million, \$93 million was required for university construction and \$97 million for hospital construction, but only \$9 million of the latter amount was for research facilities.

Over the immediate future the staffing of the Canadian research programme, whether in medical science or dental science, largely will depend on the development of research facilities in universities, hospitals and associated institutions and the expansion of the supply of manpower in the medical and dental schools in Canada, supplemented by the increased personnel employed by the Federal Government, provincial governments and the pharmaceutical industry. The possibility of training too many people for medical, dental and related research need not be considered, certainly not before the decade of the nineteen seventies. The pressing need is to expand the staff and the facilities of medical and dental schools and, in this way, increase the volume of health research while at the same time expanding the supply of research workers in the future. The problems involved in the short run are substantial but in the long run the pay-offs can be extremely large.

That the problem essentially is one of expanding the supply of research personnel, more than providing funds for existing research personnel, can be seen from the position of dental research in Canada. In 1962, the number of Canadian dental personnel qualified to do research, and carry out some research as part of their general activities, was about 30. In that year ten dental graduates were undergoing research training preparatory to joining the staff of dental schools.<sup>2</sup> However, as the brief from the Faculty of Dentistry, University of Alberta, points out, research in dental science was limited by the scarcity of full-time teachers of dental science of whom there were fewer than ten in Canada.<sup>3</sup> Such was the shortage of qualified personnel, that despite limited financial resources, at the 1960 meeting of

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<sup>1</sup> MacFarlane, J. A., *et al.*, *op cit.*, Chapter 12. These estimates were included in the brief submitted by the Canadian Universities Foundation to the Government of Canada in May 1963.

<sup>2</sup> *The Canadian Dental Association*, brief submitted to the Royal Commission on Health Services, Ottawa, March 1962, XXIV-7. The first Canadian Conference on Dental Research was held in October 1961. This conference was attended by representatives from all dental schools, the Department of National Health and Welfare and the Royal Canadian Dental Corps.

<sup>3</sup> *The University of Alberta, Faculty of Dentistry*, brief submitted to the Royal Commission on Health Services, Edmonton, February 1962, p. 18.



the Associate Committee on Dental Research of the National Research Council it was reported that there were adequate funds available to meet the requests of those engaged in dental science research in Canada.<sup>1</sup>

### *Other Problems*

One factor limiting the development of research in the field of medical science is the shortage of good medical libraries. There can be no doubt that the success or failure of a teaching and research programme is just as dependent on good libraries as it is on good laboratories and equipment. Yet holdings in only 2 of the 12 university medical libraries approach the size now generally accepted as necessary for the support of an expanding programme of graduate teaching and research.<sup>2</sup> More specifically, the number of current periodicals received regularly in all but two libraries falls below the suggested minimum standards; the combined lists of all 12 libraries do not cover the journals indexed in *Index Medicus* and no library can offer more than 50 per cent of the subject coverage represented by that list, while 3 have less than 20 per cent.

On a different level, most of the libraries are understaffed, and the facilities<sup>3</sup> of all libraries are strained to the utmost by the increasing demands being made upon them. In view of this situation, it is quite apparent that the library resources needed to support Canada's medical education and research programme are insufficient for present requirements and that future demands will be greater than ever before. Substantial financial assistance is required to bring medical library facilities in this country to a satisfactory standard required for the effective performance of research and educational efforts in Canada and we make appropriate recommendations in this respect at the end of this chapter.<sup>4</sup>

A different sort of problem is that of providing for the indirect costs of health research. The programme of assisted research grants initiated by the National Research Council more than forty years ago was based on the premise that the recipient was to be *assisted*, and that the university in which he worked was to provide space and facilities out of its own resources. This model was adopted by the other granting agencies as they were created. The health research programme has grown so large in the past few years, however, that universities are beginning to examine the cost of providing heat,

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<sup>1</sup> *Ibid.*, pp. 20 and 21.

<sup>2</sup> This statement and those that follow are based on a brief by *The Committee on Medical Science Libraries of the Canadian Library Association*, presented to the Royal Commission on Health Services, Toronto, May 10, 1962.

<sup>3</sup> Facilities include working space for the library staff, seating capacity for the users, stacks, etc.

<sup>4</sup> See Recommendation 220, pp. 130 and 131.

light, cleaning service, and other services. What has become significant is that it is not unusual for the total amount of grant money received for research by the staff of a faculty of medicine to equal the total faculty budget for salaries for teachers and supplies. The costs of the accounting procedures associated with such grants can be substantial.

Protests by American universities about the increasing indirect cost of research have led to a practice among fund-granting agencies in the United States to provide "overhead" costs in their grants. The amount varies from 10 per cent to 50 per cent of the total grant. At the annual meeting of the Association of Canadian Medical Colleges in 1961 the deans of the faculties of medicine passed a resolution asking that granting organizations make supplemental grants to the universities to assist in meeting the indirect cost of administering grants-in-aid of research. The Commission recognizes that research grants often place significant financial burdens on the recipient university. We believe that some assistance should be provided for universities to help defray the costs of administering grants. Consequently we conclude, one way of meeting this problem could be that some part of the proposed annual 50 cents per capita Health Professions University Grant could be allocated to meet a share of the indirect costs of research grants.<sup>1</sup>

## THE FUTURE SUPPLY OF MEDICAL AND DENTAL SCIENTISTS

What are the prospects for the expansion of medical and dental research personnel in Canada by 1971? In 1961-62 the deans of the Canadian medical schools reported that there were at least 1,200 persons professionally qualified to engage in health research at their universities and at associated hospitals. Of these about 800 were full-time faculty members and the remainder were fully trained part-time teachers.<sup>2</sup> Some faculty members devote all of their time to research, but all of the rest give part of their time. It is not possible to indicate the percentage of their time this latter group of academics applied to research. At the same time there were about 14 full-time and 2 half-time members of the staff of dental schools with graduate degrees in one of the biological sciences in addition to a dental degree; there were also 20 full-time and 34 part-time staff with qualifications in one of the clinical specialties. Virtually all of these had additional basic science training and some of them were engaged in research.<sup>3</sup>

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<sup>1</sup> See Volume I, Chapter 2, Recommendation 174, p. 77.

<sup>2</sup> MacFarlane, J. A., *et al.*, *op. cit.*, Chapter 10.

<sup>3</sup> Data on dentists from Paynter, K. J., *op. cit.*

In addition to the scientists in the universities there were other men and women in government laboratories and pharmaceutical laboratories who were active in health research. The estimated number of scientists engaged in health research in Federal Government departments is shown in Table 4-9.

**TABLE 4-9 BIOMEDICAL RESEARCH WORKERS IN  
FEDERAL GOVERNMENT DEPARTMENTS  
AS AT MARCH 31, 1963**

Department	Number	Full-time Equivalent
National Health and Welfare.....	257	83
Veterans Affairs.....	53	34
Defence Research Board.....	20	20
Total.....	330	137

SOURCE: Information supplied by Dominion Bureau of Statistics, Business Finance Section.

The number of biomedical research workers in provincial government departments and in pharmaceutical companies is not available. However, it is believed that the number is relatively small.<sup>1</sup>

In summary, although we do not know the proportion of their time devoted to research, it is estimated that there were between 1,600 and 1,700 people engaged in medical and dental research in Canada in 1963.

Medical educators estimate that Canadian medical schools will require a faculty of at least 2,200 by 1971; of these, 1,600 would be full-time faculty.<sup>2</sup> All would be fully trained and expected to carry out research in their fields in conjunction with their pedagogical responsibilities. It is estimated that by 1971 about 150 of the faculty in schools of dentistry would carry out some research in connection with their teaching duties.<sup>3</sup> The

<sup>1</sup> A survey of scientific and technical professions conducted in 1963 by the Economics and Research Branch, Department of Labour, Canada, suggests that there were 23 individuals carrying on research related to medicine within provincial health departments and about 153 people doing the same work in private industrial laboratories. Most of the people in the latter group were employed in the pharmaceutical industry.

<sup>2</sup> For a more complete discussion concerning these figures see MacFarlane, J. A., *et al.*, *op. cit.*, Chapter 10; see also Volume I, Table 13-6.

<sup>3</sup> See Volume I, Chapter 13, p. 558. The requirements for dental faculty in 1971 are estimated at 660, including full-time, half-time and part-time personnel. What proportion of this total will do research is uncertain but for purposes of this estimate it has been set at 150. This is about 60 per cent of the estimated full-time and half-time personnel.



number of investigators engaged in health research in government laboratories is projected at 550 in 1971 as compared to 330 in 1963.<sup>1</sup>

Excluding those scientists with professional qualifications in provincial government laboratories and pharmaceutical laboratories, it is projected that there would be about 2,900 health research workers active in Canada in 1971, though not all would be doing full-time research. In view of the limitations of the data this figure must be recognized as subject to some considerable margin of error but it provides a basis for estimating the needs for research funds.

### PROJECTED SPENDING ON MEDICAL AND DENTAL RESEARCH, 1961-1971

As indicated in Table 4-10, estimated medical and dental research expenditures in 1961 amounted to \$15.1 million. Of the total spent, about \$12.2 million was used to finance research carried out in universities and private research laboratories and \$2.9 million for the support of intramural research of the Federal Government.<sup>2</sup>

How rapidly expenditures on health research will increase in the future is not easy to say. In view of the time it takes to expand the supply of research personnel associated with new and expanded university medical and dental schools and teaching hospitals, the demand for research funds in 1971 is difficult to estimate. In addition, the growing complexity of research and the increase in prices that will occur over the period make projections even more difficult. It is evident, however, that research expenditures must increase if Canada is to receive the benefits that accrue from such activities, and our projections reflect this view. As shown in Table 4-10, we project that by 1966 the sum of money available to finance medical and dental research should amount to \$26 million and by 1971 should increase to \$48 million, which excludes expenditures by the Federal Government for intramural research. Federal expenditures on intramural research are projected to rise to \$4.5 million in 1966 and to \$6.0 million in 1971. Total funds available for the support of medical and dental research therefore are projected to rise from \$15.1 million in 1961 to \$54 million in 1971, an

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<sup>1</sup> The major increase in government employment arises from the recommendations relating to drug research. See Volume I, Chapter 2, Recommendations 80-82, pp. 44 and 45.

<sup>2</sup> When comparing these figures with those shown in Volume I, Chapter 11, p. 471, the following points should be kept in mind. On p. 471, estimated expenditures on medical and dental research were estimated to have amounted to \$12 million in 1961. This amount excludes expenditures made by the Federal Government for intramural research amounting to \$2.9 million. These latter expenditures were included as part of health expenditures made by public authorities. Research expenditures carried out by the pharmaceutical industry for the development of ethical drugs is discussed in Volume I, Chapters 16 and 17.



**TABLE 4-10 ESTIMATED EXPENDITURES\* ON MEDICAL AND DENTAL RESEARCH, BY SOURCE OF FUNDS, 1961, AND PROJECTED EXPENDITURES, BY SOURCE OF FUNDS, CANADA, 1966 AND 1971**

(millions of dollars)

Source of Funds	1961	1966	1971
Federal Government†.....	10.2	23.5	44.5
Intramural Research.....	2.9	4.5	6.0
Extramural Research.....	7.3‡	17.0	34.5
Expenditures to Replace U.S. National Institutes of Health Grants in Canada.....	—	2.0	4.0
Provincial Agencies.....	0.3 <sup>a</sup>	1.0	1.5
Voluntary Organizations.....	3.2	5.5	8.0
United States National Institutes of Health.....	1.4 <sup>b</sup>	0.5	—
Total.....	15.1	30.5	54.0

\*Includes both grants-in-aid of research and fellowships.

†In the case of the Federal Government expenditures, adjustments were made to convert data from a fiscal year basis to a calendar year basis.

‡Includes an estimated \$130,000 for dental research.

<sup>a</sup>Province of Ontario.<sup>b</sup>Estimates for a calendar year.

SOURCE: 1961 data based on Table 4-6.

annual average rate of growth of 13.6 per cent over the decade.<sup>1</sup> When we add to this the sums that would become available to the universities through the Health Professions University Grant<sup>2</sup> and through our recommendation that the costs of the hospital services rendered by medical school personnel in teaching hospitals be considered as part of the grants made under the Hospital Insurance and Diagnostic Services Act,<sup>3</sup> the increased amount of money available for research is substantial.<sup>4</sup>

<sup>1</sup> When comparing these projections with those made in Volume I, Table 20-4, the following points should be kept in mind. In Table 20-4, expenditures on health research exclude intramural expenditures of the Federal Government which are included in expenditures on public health. It should be noted that the estimate that appears in Table 4-10 for extramural research in 1971 is \$48 million, the same as in Table 20-4 in Volume I. For the year 1966, the expenditures projected for research excluding Federal Government intramural research expenditures have been reduced to \$26 million in Table 4-10 from \$32 million in Table 20-4 in Volume I. This reduction was made in view of the difficulty of expanding the supply of research personnel by 1966 and does not affect, in any significant way, the projections of total and per capita spending nor the percentages of GNE spent on health, set forth in Table 20-4, Volume I.

<sup>2</sup> See Volume I, Chapter 2, Recommendation 174, p. 77.

<sup>3</sup> See Volume I, Chapter 2, Recommendation 143, p. 71.

<sup>4</sup> The cost of social and operational research associated with the Health Services Grants and carried out by the Health Sciences Research Council would be met from the administrative costs portion of those grants.

This is a sizeable rate of growth of spending but it must be related to the projected growth of manpower if some indication of the sufficiency of these sums is to be obtained. We have estimated that between 1961 and 1971 the supply of qualified applicants for research funds, including medical and dental personnel, will rise from 1,600 to 2,900. With total expenditures rising from \$15 million to \$54 million this is the equivalent of an increase in the average amount available for potential research workers from about \$9,400 to \$18,620. In short, our projections permit research assistance to be given to almost double the number of persons while doubling the average amount of funds available for each applicant. The annual average growth rate of per capita funds is projected to amount to 7.1 per cent.

Yet this projection would still leave the average per capita sums available considerably below those projected for the United States even though the latter are projected to grow at approximately the same rate.<sup>1</sup> The only test of this projection will be if it is sufficiently high to prevent any substantial drain of qualified professional personnel to the United States and if it attracts increasing numbers of Canadians to enter a research career. If such a drain takes place or an insufficient number of Canadians embark on a research career, then the funds available for research must be increased. With present knowledge the rate of increase we have projected appears to be sufficient to minimize these possibilities.<sup>2</sup>

In view of the projected rapid rates of growth of medical and dental schools the research expenditures on intramural research conducted by the Federal Government are projected to increase at a slower rate. Thus, in 1961 federal intramural research accounted for about 20 per cent of total expenditures. By 1971, it is estimated that these expenditures will account for only a little more than 10 per cent. However, in view of the absolute increase in funds this should be sufficient to carry out the responsibilities of federal agencies.

Our projections of the sources of funds for research also appear in Table 4-10. The projections of spending by provincial agencies and

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<sup>1</sup> See *Resources for Medical Research*, Report No. 3, Manpower for Medical Research Requirements and Resources, 1965-1970, U.S. Department of Health, Education, and Welfare—Public Health Service, January 1963. The estimated average amount available to professionally trained research workers in the United States in 1961 was \$18,000; this is projected to increase to \$40,000 in 1971. It should be noted that it is not possible directly to compare average Canadian expenditures with average American expenditures since the former exclude personnel employed by pharmaceutical companies while the latter do not. In addition, the proportions of full-time and part-time research personnel may differ and thus affect average expenditures.

<sup>2</sup> In view of these projections it should be noted that the Canadian Dental Association has estimated that expenditures on dental research and the training of research personnel could amount to \$3 million in 1978 compared with the amount of \$2.8 million estimated here for 1971. See *The Canadian Dental Association*, brief submitted to the Royal Commission on Health Services, Ottawa, March 1962, Appendix XXIV, p. 7. To the extent that dental research expenditures were less than \$2.8 million, the average sums available for medical research would be higher than \$18,620.

voluntary organizations are, to a large extent, based on the rapid rate of growth of spending that took place in the period 1952-1962. Whether or not this rate of increase can be maintained by these agencies is not within our power to say. Nor are we saying that voluntary organizations must raise this much for health research. However, if these funds are not provided by these organizations they must be provided by somebody if health research—and with it the education of health personnel—is to increase at a rate which this country requires. If these funds are not forthcoming from voluntary organizations or other sources then they must be provided by the Federal Government.

The same situation exists with respect to the grants made in Canada by the United States National Institutes of Health. If the funds from this source were to continue to grow in the future at somewhat the same rate as they have done in recent years they could amount to about \$4 million by 1971. However, in view of the reduction in funds made available by the National Institutes of Health, this \$4 million would have to come from other sources. It may be that voluntary or provincial government grants-in-aid of research would rise by an amount sufficient to compensate for the withdrawal of grants by the National Institutes of Health. But if this does not happen, then the Federal Government would have to provide an additional \$4 million for extramural research in 1971. In our projection of federal spending on extramural research as shown in Table 4-10, we have made this assumption and federal spending to replace NIH grants is projected to amount to \$2 million in 1966 and to \$4 million in 1971.

Our recommendations relating to the financial support of extramural medical and dental research by the Federal Government were two: that the Medical Research Council Grant be increased by an additional \$2 million each year during the five-year period 1961-1966 and that these funds be transferred to the Health Sciences Research Council; and that extramural research now supported by the National Health Grants Programme, the Associate Committees on Dental Research and Psychology of the National Research Council and the Queen Elizabeth II Fund also be transferred to the Health Sciences Research Council.<sup>1</sup> Since it is evident that \$2 million a year will not be a sufficiently large annual increase for the Medical Research Council after 1965, we recommend that for the quinquennium 1966-1971 these funds be increased by an additional \$3 million a year. Further, since it is evident that extramural support from the Departments of Health, Veterans Affairs, the Defence Research Board and other federal granting agencies would continue to increase if it remained the responsibility of the relevant department, we have projected that it would continue to grow after it has been transferred to the Health Sciences Research Council. As shown in

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<sup>1</sup> See Volume I, Chapter 2, Recommendations 178 and 197(c), p. 81 and p. 91.



Table 4-10 the extramural support of medical and dental research by the Federal Government through the agency of the Health Sciences Research Council would amount to \$38.5 million in 1971, an increase over 1961 of over \$31 million.<sup>1</sup>

The need to support health research is so great that expenditures of less than \$48 million on health research by 1971 excluding Federal Government intramural research expenditures almost certainly would have an adverse effect on Canada's research programme. The reduction of financial support from the National Institutes of Health and a slower rate of increase in the supply of funds available from voluntary agencies would seriously limit the amount of health research that must be undertaken. In these circumstances, we now recommend that where the funds available from other sources are insufficient to offset the decline in research funds from the National Institutes of Health or where the rate of growth of funds from voluntary organizations is less than that projected here, such funds must be provided by the Federal Government.<sup>2</sup>

### FUTURE CAPITAL EXPENDITURES FOR MEDICAL AND DENTAL RESEARCH

Since medical and dental research are intimately associated with the education of physicians and dentists the costs of facilities for these activities are included in the cost of expansion of medical and dental schools and the hospitals associated with such schools.<sup>3</sup>

The crash programme that we have recommended in Volume I for the expansion of facilities for the education of health personnel in universities and teaching hospitals recognizes the need for adequate research facilities associated with educational facilities in both these areas. In this sense the recommendations we made relating to facilities and personnel were interdependent. The expansion of the facilities and staff to educate health personnel will also provide the facilities and the staff for an expanded Canadian health research programme.

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<sup>1</sup> The recommendations relating to expansion of the funds available to the Medical Research Council and through other departmental extramural grants would involve an increase in spending by the Federal Government of about \$27 million. The remaining \$4 million arise from the substitution of federal funds for United States Institutes of Health funds.

<sup>2</sup> See Volume I, Chapter 21, p. 869, Table 21-3. In this table all expenditures in support of research in universities or research foundations are envisaged as coming from government. Thus the projected public expenditures for 1966 are \$32 million (now revised to \$26 million) and for 1971, \$48 million. This followed from our belief that these sums must be available. The projected expenditures on intramural research conducted by the Federal Government are included with expenditures on Public Health.

<sup>3</sup> No evidence is available from which to project the capital costs of any expansion of intramural research conducted by the Federal Government or by provincial governments. The omission of such expenditures does not seriously affect the over-all estimates presented here.



In Volume I of our Report we limited our projection of expenditures to the years 1966 and 1971 and for those years we projected that the total outlays for hospital construction (including teaching hospitals), medical schools and dental schools would amount to \$159 million and \$204 million.<sup>1</sup> Of these sums, in 1966, \$144 million were projected for hospital expenditures, \$10 million for expenditures on medical schools and associated research facilities and \$5 million for dental schools and associated research facilities. The figures for 1971 were \$186 million, \$10 million and \$8 million respectively.

### *Hospitals*

In Volume I of our Report we recommended that the provisions of the Hospital Construction Grant be amended to provide one-half the cost of hospital facilities for new university hospitals or for expansion or renovation of existing university-affiliated teaching hospitals, or teaching units in non-university hospitals to a maximum of ten beds per student in the graduating classes of Canadian medical schools.<sup>2</sup> No attempt was made, however, to estimate what proportion of new hospital construction would be represented by this type of construction. We did, however, allow for an increase in the average cost of a hospital bed in our projections—from \$18,000 at the beginning of the decade to \$20,000 in 1966 and to \$24,000 in 1971—because many of the hospitals built will be teaching hospitals associated with universities and thus will need more extensive and expensive facilities.

In its recommendations to the Government of Canada, the Association of Medical Colleges recommended that about \$97 million of new construction was needed to provide university medical schools with the hospital teaching facilities needed.<sup>3</sup> Whether each of the projects they recommend is desirable we cannot say. However, we do accept the general recommendation relating to hospital research facilities and our projections of expenditures on hospital construction are sufficiently large to include this amount. Projected expenditures on new and replacement construction over the period 1966 to 1971 inclusive are around \$900 million, sufficient to meet the needs for hospital space associated with clinical research.

### *Medical Schools*

Unlike spending on hospital construction, which is primarily related to population growth and the increased urbanization of the population, ex-

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<sup>1</sup> See Volume I, Chapter 20, p. 851, Table 20-26.

<sup>2</sup> See Volume I, Chapter 2, Recommendation 142, p. 71.

<sup>3</sup> MacFarlane, J. A., *et al.*, *op. cit.*, Chapter 12.

penditures for the construction of new medical schools and the reconstruction and addition of research facilities in existing medical schools are not projected to grow steadily over time. Rather, in view of the crash programme that we recommend, they increase to a peak in the late nineteen sixties and then fall back. The expenditures of \$10 million for the specific years 1966 and 1971, therefore are an incomplete guide to total spending over the period to 1971. No attempt has been made to separate the research component from that of education in the projected expenditures.

The projection of expenditure on new construction within existing medical schools is based on the recommendation in this area made by the Association of Canadian Medical Colleges and suggested by Dr. MacFarlane. Including the new medical school at Sherbrooke, expenditures on these facilities were estimated to be \$93 million.<sup>1</sup> With regard to new medical schools, we have recommended that in addition to the University of Sherbrooke four new medical schools be built in the second half of the nineteen sixties.<sup>2</sup> The cost of these medical schools, including all the laboratory and research space associated with them, has been projected at \$12 million for the first to be built, rising to \$14 million for the fourth.<sup>3</sup> The total sums projected for the decade of the nineteen sixties would be about \$144 million.

It is further estimated that by the beginning of 1966, about \$32 million of these projects would be completed. In 1966, another \$10 million would be undertaken. As the crash programme got under way, expenditures would average about \$25.3 million in the years 1967 to 1969, fall to about \$16 million in 1970 and to \$10 million in 1971 as the crash programme is completed.<sup>4</sup>

### *Dental Schools*

The proportion of capital outlays for new and expanded dental schools which would be attributable to research facilities has not been estimated separately. However, the projected cost of these schools appears to be sufficient to cover both education and research.

The additional number of places required in existing and new dental schools and the timing of such addition has been described in Volume I.<sup>5</sup>

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<sup>1</sup> *Ibid.*

<sup>2</sup> See Volume I, Chapter 13, p. 529, Table 13-4.

<sup>3</sup> MacFarlane, J. A., *et al.*, *op. cit.*, Chapter 12, estimates that the cost of a new medical school could be \$9 to \$10.5 million. In view of future increases in the cost of construction and the likelihood of increased research facilities in medical schools, the projected cost was raised to \$12 million and then to \$14 million.

<sup>4</sup> To the extent that the expansion of new facilities is accelerated or is not completed in the projected time period, expenditures would have to be redistributed.

<sup>5</sup> See Volume I, Chapter 13, pp. 555-557.

Over the period 1963 to 1975, provision has to be made for the construction of four new dental schools and the expansion of six existing schools. The cost of constructing one place in a dental school has been estimated at about \$20,000.<sup>1</sup> In view of the increasing costs likely to be experienced, this estimated cost has been progressively increased to \$22,000 by 1971.

On the basis of these assumptions, the total outlays for dental facilities over the period 1963-1971 are projected to amount to about \$34 million. Of this, \$8.6 million of construction is estimated to be completed before 1966 and another \$5 million to be completed in 1966. Over the period 1967 to 1970 inclusive, expenditures are projected at an average of \$3.2 million a year. In 1971, with the commencement of the two schools that must be in operation by 1975 and the completion of schools that must be in operation by 1971, expenditures are projected at \$7.5 million to \$8 million.

The timing of these expenditures of course is subject to a considerable degree of uncertainty. One of the new schools projected for the nineteen seventies almost certainly will be built before that period while another may not expand until after 1970. On the whole, the amounts projected appear sufficient to meet the research needs of dental schools. In addition, our recommendations relating to the establishment of Departments of Dentistry in major general hospitals and the establishment of centres for the treatment of cleft palate cases will provide facilities for clinical research in teaching hospitals.<sup>2</sup>

## RESEARCH AND THE QUALITY OF HEALTH CARE

The discoveries that have stemmed from scientific research and particularly from research in those areas that affect the lives and health of Canadians are well known. Support of research in the field of health is warranted on these grounds alone. Yet it must not be forgotten that the quality of health care, in terms of the number of physicians, dentists and other health personnel available as well as the quality of their practice, is, in the last resort, also dependent on the amount of research conducted in Canada.

The education of health personnel is dependent on the instructional staff available in universities. Here the ability of the universities to attract

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<sup>1</sup>Paynter, K. J., *op. cit.*, Chapter 9. The cost of providing a place in a dental school is estimated by Paynter at \$20,000. The Faculty of Dentistry of the University of Toronto estimated that to construct a school that would provide for a graduating class of 60 students, or a total of 240 places at any one time, would not cost less than \$4 million or \$16,600 per place. *The Faculty of Dentistry, University of Toronto*, brief submitted to the Royal Commission on Health Services, Toronto, May 1962, p. 1.

<sup>2</sup>See Volume I, Chapter 2, Recommendations 54-57, p. 39.



and retain highly qualified teaching staff depends on the facilities available for research and the provision of sufficient funds to finance the research activities of university personnel. Since the supply of health personnel must expand to meet the needs of the Canadian people, there must also be available the appropriate laboratories, libraries, equipment and ancillary personnel that will enable the supply of qualified instructors to be expanded.

The quality of medicine is also improved by the expansion of clinical research. The quality of health care, as exemplified in the treatment that patients receive, is vitally dependent on the clinical research carried out in the teaching hospitals of the universities or those hospitals associated with medical schools. It is here that standards of care are set, improved and tested. It is therefore also necessary that the facilities for clinical research be expanded and that funds be made available to support this type of research.

Finally, even though students may not themselves enter a full-time teaching or research career, there is great value in participating in research in the health sciences since it broadens their minds, increases their comprehension, and by its inherent discipline helps to raise the level of all aspects of their subsequent practice. It is self-evident that experience and training in scientific investigation are essential at an early stage in the education of those students who intend to spend their lives either in fundamental research or in the investigations of disturbances of body and mind.

The universities are the focus of fundamental investigation and of scientific instruction in Canada. At this stage of Canada's development, few health scientists would quarrel with the view that research should be concentrated in these institutions. Universities are more than the custodians and communicators of knowledge; they are the well-springs of new knowledge. The relationship between the transmission and the advancement of knowledge must be a close one. There must be an appropriate balance in education in the health sciences with proper stress on research and an emphasis on the function of teaching and training health personnel.

If this is not maintained, both the quality of the work of health professionals as well as the number available to care for Canadians will be reduced. If such a situation is to be avoided there must be sufficient funds forthcoming to ensure that the facilities and operating revenues are provided both to attract young Canadians into health research and to ensure that our eminent scholars do not go elsewhere for lack of opportunity at home. Our recommendations are such as to ensure that the quality of Canadian health care, in so far as it is dependent on health research, continues to improve. To achieve this goal the facilities and the manpower must be made available with all possible speed.



## HEALTH SCIENCES RESEARCH COUNCIL

*Organization*

Because of the importance that we attach to health research and because of the interdisciplinary implications of health research associated with the Health Services Programmes, we recommended in Volume I of this Report that the Medical Research Council be broadened by appropriate legislation to include all fields of health research and renamed the Health Sciences Research Council.<sup>1</sup> As so reconstituted the Council would become the principal advisor to the Government of Canada in the planning and support of health research and the allocation of research funds, and its expanded services would be available to provincial governments, voluntary health associations, and universities.

Since many new disciplines have been added to the traditional health team, we also recommended that there be provision in the membership of the Council for the appointment of outstanding persons from the health and other professions.<sup>2</sup> We further recommended that an outstanding "layman", not connected with any particular health service programme or agency, should be appointed chairman when a vacancy occurs.<sup>3</sup> The advantage to the Council of such an arrangement would be that not only would the chairman be completely objective and impartial as between disciplines, but as one who has no financial or professional interest in the budget which he presents, he could press the case for the funds the Council thought necessary.

One essential aspect of the organization of the Council is to ensure its independence with respect to the many institutions, agencies and government departments now involved in the health field. If the Council is objectively to evaluate health programmes, whether public or private, the activities of individuals, whether scientist or administrator, and health institutions, whether voluntary, government or otherwise, it must be independent.

We can depend upon the chairman and the members of the Council to protect its independent status, but rather than place the Council under the direction of a federal minister we feel that the chairman should report to the Committee of the Privy Council on Scientific and Industrial Research. This Committee, which was established in 1916 under the same Order in Council as the National Research Council, consists of ten Ministers of the Crown, and has specific responsibility for the supervision and co-ordination of

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<sup>1</sup> See Volume I, Chapter 1, pp. 79-81, and particularly Recommendations 177-185.

<sup>2</sup> This pattern is also followed by the National Institutes of Health (U.S.A.), and by the Medical Research Council of Great Britain.

<sup>3</sup> While the Chief Executive Officer of the Medical Research Council in Great Britain, Sir Harold Himsworth, is a medical scientist, the Chairman has invariably been a prominent layman.

government research, and for the foundation of broad policies on government research and development expenditures. Although there would be no direct organizational link between the Council and the Department of National Health we envisage that there would be, in practice, a close working relationship between the two agencies. We envisage also the closest co-operation with all other health agencies and organizations, particularly the Health Planning Council of Canada, the provincial departments of health, health services commissions and health planning councils, the professional bodies representing health personnel, and the Dominion Bureau of Statistics. The success of the Council will be evident in the free flow of information between all these bodies and the results that will flow from their united efforts.

Finally, we have recommended that the Council should be authorized to appoint its own research director (or directors), medical, dental, and other professional staff and to set up any technical advisory committees it requires.

### *Functions*

As we outlined in Volume I, without restricting the general terms of reference we proposed for the Council, we envisaged the following as among its specific functions:

- (1) Be responsible for the administration of research grants in the health sciences.
- (2) Conduct, and provide grants for research in the medical, dental, biological and related sciences, basic drug research, public health and any other scientific research including research in the social sciences relating to health, and the publication of research results.
- (3) Conduct and provide grants for research into alcoholism and drug addiction including psychological and social research.
- (4) Provide an increased number of research fellowships, research associateships and assistantships in medical, dental, pharmacy, public health and university nursing schools.
- (5) Support research concerning the most effective training and use of health workers.
- (6) Participate in developing and maintaining a continuing system of health statistics in Canada including a dental health index and special studies for the assessment of current health problems and their trends.
- (7) Carry out medium-term and long-term projections of Canada's needs for health personnel, facilities, research and organization on behalf of the Health Planning Council of Canada.

- (8) Evaluate intramural research conducted by departments of the Government of Canada in the area of medical and related scientific research.
- (9) Conduct or provide grants for research studies evaluating the effectiveness of the various elements of the health services programme as a way to improve the quality of health care Canadians receive.

Most of these functions need no further comment. For a few some further explanation is necessary.

First, our recommendations relating to the support of health research indicate that the Council should conduct and provide grants for research in the medical, dental, biological and related sciences, basic drug research, public health and other scientific research including research in the social sciences relating to health. We do not, however, envisage that the Council would conduct its own research programme in the areas of medical, dental or pharmaceutical research in the immediate future.<sup>1</sup> The shortage of trained personnel is such that the needs of the universities must be met before developing any type of health institute. When the new and expanded medical and dental schools are staffed appropriately, the Council could then review the advisability of developing a national institute of health. This does not mean that medical, dental, or drug research will not be conducted at the federal level. Those federal departments, such as the Department of National Health and Welfare, which now conduct research would continue to do so in the future and the Health Sciences Research Council will participate in this development by evaluating intramural research conducted by departments.

Second, although the ability of the Council to perform its functions in the area of medical, dental and drug research is evident, the same may not be true for some time in the areas of the behavioural sciences.

With the broadening of its functions from medical to health research the Council must conduct or support research into the extent of illness and the measurement of good health, the social aspects of health and illness, their economic implications, and particularly the evaluation of health services and programmes. This evaluation must become an integral part of the Health Services Programmes and all their component programmes in order to achieve and maintain a high quality of the services rendered. In these areas the Council should look forward to conducting some of its own research and would therefore require staff from a variety of fields including medicine, dentistry, psychiatry, psychology, sociology, nursing, economics, statistics

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<sup>1</sup> Although it is difficult to classify public health research into medical or social research we envisage that the Council, in the initial stages of its operations, would limit its activities to the latter.



and mathematics, and others, all of whom would need to be trained in the method of evaluation of health research. These methods are not those of the basic science laboratory, but have been developed mainly in the area of the behavioural sciences. For example, the evaluation of the effect on the population of a particular health education programme would require the research skills of the sociologist; but to estimate the impact of, say, the National Hospital Insurance Programme on hospital standards and utilization, would require the combined knowledge and research skills of a physician, an economist and a sociologist. In time the nucleus of the skills required to undertake such research could be available to the Council within its own staff but in order to facilitate its research operations, the Council should provide grants to suitably qualified persons or groups of persons outside the Council who would undertake specific projects either within a university or in some other context. A fellowship programme should also be instituted in order to train qualified personnel in the skills required for this type of research.<sup>1</sup>

Third, the Council which will form an essential part of the future health organization must be responsible to a large extent for the flow of information among the various health organizations. Among the information vitally necessary for research in the sciences as well as operational research, we have singled out one area, that of statistics. This is a field we found sadly neglected in this country,<sup>2</sup> and in the following chapter we have outlined our views regarding the development of a systematic and co-ordinated approach to the problem of health statistics in Canada.

In this context we also envisage that the Council either carry out, or have carried out on its behalf, medium- and long-term projections of Canada's need for personnel, facilities, research and organization on behalf of the Health Planning Council of Canada. In the development of these projections, the Council will have the assistance of the Department of National Health and Welfare, provincial health planning councils, and health services commissions, but the over-all needs of Canada must be assessed by the Health Sciences Research Council which would be the only body with access to all available data.

### *Private Donations for Health Research*

We have already outlined the sources of funds available to the Health Sciences Research Council for the conduct of its activities.<sup>3</sup> With the increased funds available through the Medical Research Council Grant, with the extramural research grants of various government agencies now allocated through the Health Sciences Research Council and with the funds avail-

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<sup>1</sup> The publication of worthwhile research results should be encouraged.

<sup>2</sup> See Volume I, Chapter 2, Recommendations 184 and 186-189.

<sup>3</sup> See p. 119.

able from the administrative budgets of the Health Services Programmes, the Council would have the financial resources to carry out its responsibilities.

In addition to these government sources of funds we have also recommended that the Council be authorized to hold and to disburse funds received from other sources such as individuals, corporations or foundations.<sup>1</sup>

In this area we visualize legislation similar to that governing the Canada Council which is empowered to "acquire money, securities or other property by gift, bequest or otherwise and may . . . expend, administer or dispose of any such money, securities or other property . . ., subject to the terms, if any, upon which such money, securities or other property was given, bequeathed or otherwise made available to the Council".<sup>2</sup>

The various types of benefactions to the Canada Council comprise: (1) *unconditional grant* where both the principal and income may be disbursed at the discretion of the Council; (2) *conditional as to principal* which specifies that the principal be kept intact though merged for investment purposes with the capital of the Endowment Fund while the income may be spent as the Council sees fit; (3) *conditional as to purpose* where the benefactor stipulates the particular art form or academic discipline on which the funds are to be disbursed; and (4) *conditional as to identity of fund* where the terms specify that the proceeds be given as an award designated by the name of the donor or some other of his choice.<sup>3</sup>

It is implicit in our Recommendation 178 that the cost of administering donations and bequests from private sources be borne by the Health Sciences Research Council, thus assuring donors that the full amount of the fund will be devoted to research. With the implementation of these measures there will no doubt be a further stimulus to the support of health research on the part of corporations and private citizens.

The role of the Health Sciences Research Council in establishing the priorities for health research will be very great. With its responsibility for the allocation of funds and through its advisory committees representative of all health sciences, it cannot but be aware of the areas in which research effort must be intensified. The co-operation of those organizations concerned with research already has been achieved to a considerable extent by the informal consultation between university research workers, government research personnel and the staff of voluntary organizations concerned in these areas.<sup>4</sup> The Council will provide the framework within which future research activities can continue to be co-ordinated. Canadians thus will be

<sup>1</sup> See Volume I, Chapter 2, Recommendation 178.

<sup>2</sup> Statutes of Canada, 5-6 Elizabeth II, Chapter 3, Canada Council Act.

<sup>3</sup> The Canada Council, *Private Benefactors and the Canada Council*, Ottawa: Queen's Printer, 1962, pp. 8 and 9.

<sup>4</sup> See pp. 100 and 101.

assured that they are getting the greatest possible return from their investment in health research.

## CONCLUSION

Health research is essential to health progress. We need in Canada more and better research and a fully integrated programme to advance our knowledge and to train the scientists and professional personnel we shall require. We thereby set into motion a cumulative process: more research, greater knowledge, new means of maintaining health and combating illness, improved and higher quality health services, better health, rising levels of living and incomes, which in turn enables us to devote more of our income to health research, starting a new spiral of the cumulative process.

The benefits of this cumulative process are so numerous to the individual, to the professions and to the nation as a whole that we cannot afford disorganization, lethargy or improvisation in the development of a health research programme in Canada; instead, we need vision, initiative, co-operation and long-term planning to guide us in implementing a health research programme comparable in breadth and scope, though not necessarily in extent, with the best pursued by other economically advanced countries.

We have scientists and we will develop more of them. We have the economic means and we will develop even greater wealth in the future. All we need is the will to proceed with a programme of comprehensive health research which will bring manifold benefits to the Canadian people.

To indicate the importance which we are attaching to the role of health research in a health care programme for Canadians, 58 of the 200 recommendations which we have made in Volume I have a bearing both on this subject and the education and the training of the professions who will be entrusted with the implementation of a continually expanding and effective health research programme in Canada.<sup>1</sup> We now make three additional recommendations to ensure that the funds available will be sufficient to support the expanding research programme in the health field.

*The Commission recommends:*

- 220. That, in the provision of educational facilities for health professional personnel at research institutions, medical schools, dental schools, schools of public health and schools of nursing, adequate library facili-**

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<sup>1</sup> The measures we propose pertaining to construction of health research facilities in universities and hospitals, and to the need to discover, train and support investigators in the health field will be found in Volume I, Chapter 2, Recommendations 2-6, 13, 21-23, 28, 80, 93, 94, 115, 128, 129, 132-136, 138-150, 152-159, 161-167, 172-176, 179-182.



ties be provided to be financed from the Health Facilities Development Fund and the Health Professions University Grant.

221. That, over the period 1966-1971, the grants made by the Federal Government towards the operating budget of the Health Sciences Research Council be progressively increased by \$3 million a year.
222. That, where funds are not available from other sources to offset the decline in research funds from the National Institutes of Health, or if sufficient funds are not forthcoming from voluntary organizations and foundations to meet the projected needs in 1971, the deficiency be met by a further expansion of federal grants to the Health Sciences Research Council.

We recognize that our recommendations will require a substantial effort on the part of the federal and provincial governments both in the provision of research funds and the facilities required for research and the education of health personnel. A particularly heavy responsibility will rest with the universities and the Health Sciences Research Council to develop and to implement the type of broad programme we have outlined by participating actively and determinedly in a health research programme. These institutions, as well as the many others which we have mentioned, will be able to help build a healthier nation, thus making an important contribution to its future growth, development and happiness.



## Health Statistics

Statistics are an essential tool in all phases of research in the health sciences, medical and dental research as well as operations research. We single out health statistics for separate discussion for several reasons:

- (1) the relative neglect of the field of health statistics in recent years in Canada,
- (2) the resultant scarcity of data which time and again hampered our own investigations and the lack of organization and co-ordination of existing statistics,
- (3) the need for statistical information in the future to evaluate health progress and the effectiveness of the recommended Health Services Programmes.

### EXISTING SITUATION

The sources of health statistics in Canada are as numerous and varied as the agencies engaged in the provision and administration of health services and in health research. Statistics are found in scientific papers and reports on special studies, but most of the data are obtained as a by-product of programmes administered by public or private agencies. Thus, there are statistics from prepayment plans, voluntary organizations, municipal and provincial health departments, and hospital insurance agencies. Welfare programmes associated with health problems, such as the allowances for the disabled and the blind, also yield health statistics as do the registration of births, marriages, and deaths which serve as the source of vital statistics. Physicians, public health and industrial nurses also collect records which means that practitioners, hospitals, clinics, schools, industrial establishments, medical and hospital insurance programmes and government health departments all possess statistics relating to health in one aspect or another.

Despite the volume of health statistics collected we have found serious shortcomings. There are gaps. On the other hand there is a duplica-



tion of effort in such fields as hospital statistics (including statistics on hospital morbidity) and the reporting of notifiable diseases. Moreover, there is evidence that the analysis of health statistics, from the point of view of assessing the needs of the community and the success with which health services and programmes meet these needs, has lagged substantially behind the collection of data.

The lack of adequate statistics is evident in all major areas of the health field, i.e., the identification and measurement of health problems, the assessment of the supply of health personnel and facilities as well as their activities, and the study of health economics. If we note many shortcomings in this area, it should not be allowed to obscure the fact that many organizations do first-rate work in some of these areas. Some provinces contributed greatly to our knowledge of the problems that faced us through the use of their statistics which were timely and accurate.<sup>1</sup> The same can be said about some of the medical prepayment plans<sup>2</sup> and the Department of National Health and Welfare and the Dominion Bureau of Statistics.

But as we were concerned with the health problems of the Canadian people as a whole, our main need was for national statistics and for data showing significant variations among provinces and regions. These were difficult and sometimes impossible to obtain. In addition it was not possible, in many cases, to obtain data that would permit an evaluation of the effects of health programmes in any meaningful way.

In Volume I of our Report we noted the delays in the publication of some statistical series.<sup>3</sup> This was largely an administrative problem but one which limited the usefulness of the data. We cited the example of our national hospital statistics where some series were three or four years old by the time they were published.

The Canadian Sickness Survey 1950-51 is another example of administrative inadequacy limiting the benefits of a major project. This was the one—and it also has remained the only—attempt in Canada to conduct a comprehensive statistical evaluation of the country's health status. The collection of data was completed in 1951, the departments concerned required 11 years to complete a final report, and even then much of the material collected remained unused because resources were not available to process

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<sup>1</sup> For example in Volume I data from the Manitoba Cancer Treatment and Research Foundation were used to illustrate the relationship between incidence and mortality from cancer; the Department of Health Services and Hospital Insurance of British Columbia provided data on the causes of disabilities of adults and the incidence of carious permanent teeth per child in that province; and the Saskatchewan Hospital Services Plan yielded data on the rate of hospitalization from various diseases.

<sup>2</sup> The Commission appreciates greatly the co-operation received from Physicians' Services Incorporated, Manitoba Medical Services, and Medical Services Incorporated in making available their records.

<sup>3</sup> See Volume I, Chapter 8, p. 329.

it. Nor were the methods used in the survey adequately evaluated. Although this was an undertaking of nation-wide importance and of great interest to other countries, an insufficient effort was made to provide the necessary resources of personnel and mechanical equipment to derive the greatest possible return from the original investment in the ten provincial surveys that made up the project.

There are other instances of surveys where extensive data were collected but never processed nor results published.<sup>1</sup> Some current series have been discontinued rather than improved. For example, statistics of home nursing which could have been adapted to a comprehensive study of home care services were discontinued at a time when this Commission, and probably other organizations, were badly in need of data for the evaluation of home care services.

Similarly, the Dominion Bureau of Statistics discontinued a statistical series on illness in the Civil Service.<sup>2</sup> While this study was subject to certain limitations<sup>3</sup>—some of which could probably have been removed—it was the only study of general illness for a group of some 140,000 people. The experience of this group is of considerable importance in developing policies particularly in industrial health, i.e., the health of the working population. It offered a unique opportunity to study differences in morbidity among various groups of people such as age groups, the sexes, people doing different types of work (physically active, sedentary, monotonous, etc.). Since there are major groups of federal civil servants in all regions of Canada, regional differences also could be studied (e.g., the course of epidemics). Nevertheless, the series was discontinued because the motivation, or the resources to improve it, or both, were lacking. If this is the policy of an agency whose statutory obligation it is to produce adequate health statistics, one cannot blame hospital insurance and medical care programmes and other insurance agencies generally for using available records only for analysis directly related to their day-to-day operations.

We have already referred to mortality statistics, based on the medical certificates of death, as the most reliable single indicator of health conditions and particularly of historical trends.<sup>4</sup> Nevertheless, these statistics require more appropriate analysis to provide an adequate assessment of health problems. They must take into account that among older persons and those with chronic disease, there may be more than one condition contributing to

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<sup>1</sup> For instance, a survey of maternity cases in Manitoba, the East York Health Survey (a pilot study for the Canadian Sickness Survey), and a height and weight study of Toronto school children.

<sup>2</sup> Discontinued with the issue of the 1962 report.

<sup>3</sup> It covers a selected population and is limited to certified sick leave (i.e., generally of over three days' duration).

<sup>4</sup> See Volume I, Chapter 5, p. 141.

the death, and not one "underlying cause" which is sometimes selected by rather arbitrary criteria. Mental health statistics, despite some improvements, continue to be inadequate to provide "sufficient reliable information for research, evaluation or planning".<sup>1</sup> Tuberculosis statistics could benefit from the addition of prevalence data since mortality, admissions to institutions, and even the incidence of new cases no longer tell the whole story adequately. Finally, historical manpower statistics were so limited in their value that major policy questions relating to the expansion of medical, dental, nursing and other health education facilities could only be resolved after the Commission itself had arranged for extensive studies in this area.

There has been an improvement in certain statistical series in recent years. The quality of hospital statistics has been enhanced since the implementation of the hospital insurance programme, largely due to the activities of the Advisory Committee on Hospital Insurance and Diagnostic Services as well as through experimentation by the Dominion Bureau of Statistics with computer calculated hospital indicators. Some national or near national hospital morbidity data have been released but here there is still a considerable lack of co-ordination and comparability between different sets of data. Despite the general concern over the growing cost of hospitalization and possible control measures, we have no adequate information indicating whether there is over-use or perhaps under-use of hospital facilities. Only very limited statistics are available on such newly emerging but increasingly important patterns of health care as medical group practice, home care programmes or rehabilitation services.

The statistical needs in the health field have not always received the low priority that they appear to have received over the past decade. When the development of modern public health services called for the guidance of statistical information on the incidence of certain diseases, the logical steps were taken: a list of the diseases in question was drawn up and through an agreement among provincial and federal health departments, and with the co-operation of the medical profession, a reporting system instituted. The list of these diseases was revised on several occasions to keep pace with changing needs. When venereal diseases began to present a major health problem during and after World War II, a special reporting system was set up to aid in the treatment, follow-up, and case-finding as well as in the statistical study of trends. No corresponding effort has as yet been made to cope in a similar way with the newly emerging health problems such as chronic disease, including mental disorders, accidents, physical and mental handicaps both congenital and acquired, dental disorders, and others. Much is said of the need for increased emphasis on positive health, fitness, and the

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<sup>1</sup> Richman, A., *Psychiatric Care in Canada: Extent and Results*, a study prepared for the Royal Commission on Health Services, Chapter 2, Ottawa: Queen's Printer (*in press*).



prevention of illness but little effort has been made to define and quantify the positive state of health rather than the negative state manifested by illness.

Some, if not all, of the existing statistical projects and series are inadequate because there is no effective machinery for their evaluation. The records collected by various professional personnel and health agencies have not been fully used for the study of health problems in the community. Data have not always been obtained with a view to making effective use of modern recording and data-processing equipment. Partly, this has been the consequence of the federal structure of Canada which leads to programmes and private and government organizations being organized on provincial lines. Partly it has been the consequence of what can only be described as a jurisdictional dispute between the two federal agencies responsible for health statistics, the Department of National Health and Welfare and the Dominion Bureau of Statistics, a situation which was noted by the Royal Commission on Government Organization.<sup>1</sup> This situation, which is discussed in detail later in this chapter, appears to have prevented the Federal Government from doing all that it could do in this area.

## IMPROVEMENT OF HEALTH STATISTICS

If the system of health statistics is to meet the needs of Canadians it must be improved. Deficiencies must be made good, overlapping must be reduced as far as possible, statistics that are collected must be analysed, the results published promptly, and obsolete statistical series abandoned.<sup>2</sup> Such a development can only come about through a thorough reappraisal of what is presently being done and the establishment of some body charged with the responsibility of ensuring that improvement takes place in the future. We, therefore, examine two specific areas in the future system of health statistics: first, the types of statistics that need to be collected and the analysis they require and second, the organizational structure required.

### *Future Statistical Requirements*

Basic to the design of a system of health statistics as well as to its component parts must be the recognition that health problems have become

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<sup>1</sup> *The Royal Commission on Government Organization*, Volume 3, Chapter 3, Ottawa: Queen's Printer, 1963, pp. 48-51.

<sup>2</sup> Before discarding statistical projects which in their present form are no longer useful, an investigation should be made to see if they could not be improved, thus making use of established procedures for recording and data collection. To establish new recording or reporting procedures is often very difficult and time consuming especially where various jurisdictions are involved.



much more complex than they were in the days when most of the existing statistical series originated. When the acute and sometimes epidemic communicable diseases constituted the main health problems, statistics on the number of cases and their distribution supplied much of the data needed for the study and control of these diseases. It is different with many of the major health hazards of today. Chronic diseases are subtle and insidious in their onset, of long duration, and often uncertain as to their outcome.

The new environmental hazards that man himself creates are also complex and largely unknown in regard to their effects on health. Radiation, air pollution, carcinogenic substances usually require a long time, sometimes generations before their ill effects become manifest. While we arbitrarily assume that old age starts at age 60 or 65, this is a gross over-simplification which tends to obscure the fact that many chronic conditions characteristic of an older age group may have their onset many years before old age, as defined above, sets in. To study the etiology and epidemiology of these diseases and of the environmental factors, we need not only counts of cases but also longitudinal studies.

Case registers should be studied in this connection with a view to their wider application. Such registers are already in use for the case-finding, treatment, and follow-up in tuberculosis, cancer, mental disease, and physical or mental handicaps. The consolidation of existing registers and their expansion will not only aid in the treatment of these conditions but also provide useful statistical data on the incidence, prevalence, and the course of the disease covered.

Another area in which data are limited and where new work could usefully be initiated is at the individual and family level in order to determine not only unmet health needs but the extent to which individuals and families receive various services. The latter can only be measured adequately at the point where such services are actually received. Here, household interview surveys can provide such data as well as the social, demographic and economic characteristics of the individuals involved. In the United States this type of survey is carried out on a continuing basis but nothing has been done in Canada since the Sickness Survey of 1951.

With the development of universal Health Services Programmes such a large-scale programme may not be needed although small-scale programmes will continue to serve specific purposes. With the removal of financial barriers to health services, the records of the various programmes would come much closer to reflecting the health problems of the general population than has been the case when services were available only to selected groups of the population. From the records of physicians' services, as well as hospitals, morbidity data will become available reflecting general morbidity much more completely than hospital records alone now provide. Besides, these data will be based on a medical diagnosis instead of relying

on the individual's diagnosis as in the case of household surveys. Modern means of data processing can greatly facilitate such analysis, if the source records are appropriately designed.<sup>1</sup> The use of social security or birth registration numbers can enhance the possibility of linking health records with those of other social insurance programmes and the Census.

Although an alternative for mass surveys such as the Canadian Sickness Survey or the United States Health Interview Survey would exist within Health Services Programmes, sample surveys of households, families, or individuals would certainly not altogether disappear from health statistical programmes of the future because for certain items of information—such as attitudes, social characteristics, etc.—they will remain the only source. Sampling will no doubt be used more extensively in routine statistical analysis but particularly in an increasing number of individual studies.

Sampling procedures provide the means of efficiently dealing with a great mass of existing data such as will result from the operation of the Health Services Programmes. They also form the basis for the scientific selection of samples from a large universe from which representative data on certain subject matters may be obtained. The universe may consist of individuals or families whose habits or characteristics should be obtained. We know little, for instance, of such health-related matters as the nutrition status of Canadians, their smoking and drinking habits, their recreational activities related to both physical and mental health, their symptomatic and asymptomatic health defects which do not come to the attention of a physician, to mention but a few. Existing sample designs, such as that used in the Labour Force Survey, may be used to advantage as a basis for the selection of other population samples.

Sampling techniques are already employed in the observation of certain aspects of the environment, such as in studies of radiation and of air- or water-pollution. A host of statistics on other environmental factors will gradually be collected by sampling techniques.

In deciding what data to collect in the health field, whether they are existing or new series, the purpose they are designed to serve must be borne in mind as well as their place in an integrated framework. The purpose may be medical or dental research; it may involve the evaluation of the health status of the Canadian people and the identification of health problems and their trends; or it may concern the administration, planning and evaluation of health services. Moreover, to the extent that it is possible, data collected for one

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<sup>1</sup> Reference is made to the work being done in Canada by H. B. Newcombe in collaboration with the Biology Branch of Atomic Energy of Canada, Ltd.; the Vital Statistics Section, Dominion Bureau of Statistics; and the Division of Vital Statistics, Department of Health Services and Hospital Insurance, British Columbia.

purpose should be in a form that makes them useful for other purposes. For example, statistics of hospital patient-days are necessary for the administration of a particular hospital. They should also be in a form to permit the evaluation of the effectiveness of hospital care.

It is for this reason that statistics must be collected within a system that permits comparison between institutions, regions and even countries; they must be collected on the basis of commonly accepted principles of terminology, concepts and classifications. To compare hospital A with hospital B, their statistics must be based on comparable records and methods. To compare patients treated in hospitals with those treated for the same condition outside the hospital, a common classification of diseases must be used, as well as common classifications regarding the social and demographic characteristics of patients.

Similarly, if health problems are to be identified, statistics must permit comparability over space and time. A disease becomes a problem if mortality or incidence are higher now than they were in some period in the past, if they are higher among one age group than another, higher in one part of a country than in another, or higher than the mortality or incidence of other diseases. Of equal importance is comparability of Canadian statistics with those of other countries: differences in the incidence of diseases in different countries can provide valuable information for the study of the epidemiology and etiology of diseases; they illustrate the position of our country in relation to others; and data from other countries can be used sometimes to fill gaps in our own statistics. For all these reasons, the work of international organizations, particularly the World Health Organization, is important in the development of uniform standards, definitions, classifications, and terminology. Nor is its significance confined to international comparisons. The work of the expert committees of the World Health Organization has become widely accepted by national agencies. Canada has made considerable contributions to this work in the past.

It must also be recognized that if health professionals and institutions that collect health statistics are to provide the appropriate data, and that if statistical and other agencies are to collect, process, analyse and publish these data in a time period short enough to make them useful, there must be sufficient resources, both financial and personnel, to complete the tasks. We have provided for the costs of such operations in the administrative costs of the various health funds and for the development of trained personnel through professional training grants and the activities of the Health Sciences Research Council.

The difficulties that have arisen in the preparation of hospital statistics illustrate some of these problems, particularly that of the delay in the publication of data:



- (a) It takes time for the collecting agencies to obtain returns from some 1,200 hospitals in all parts of Canada. The smaller hospitals with a limited administrative staff encounter difficulties in completing the required returns; some institutions, like many business firms cannot see the need or the urgency for reporting. One possible solution would be the tightening of the administrative procedures. But it should also be established whether the routine returns required under the Hospital Insurance and Diagnostic Services Act can reasonably be completed by small hospitals. Perhaps administrative arrangements for groups of small hospitals could be pooled more efficiently, or the collecting agency, in the course of following up delayed returns, may be able to assist institutions in the completion of the returns.
- (b) The processing of the data involves clerical and mechanical procedures. The former requires an adequate number of qualified personnel. The machine operations also need personnel as well as the necessary equipment and facilities. Both types of resources must be adequate to accommodate, without delay, the routine analysis of statistics as well as any special projects undertaken from time to time.
- (c) At the subsequent stage of compilation and analysis the requirements for personnel stated above also apply.
- (d) Delays in producing statistics occur in the service operations such as typing, translating, editing, proof reading and printing. These services are often understaffed and as a result health statistical projects have to compete with numerous others for priorities. Here again it is a matter of providing an establishment adequate to accommodate all reasonable demands. If statistics are worth collecting—and about this one must be sure—they must be processed and published as expeditiously as possible.

In summary, major improvements are needed in the present health statistics. Important new statistical series will have to be introduced to fill the gaps that have arisen, partly as a consequence of the greater complexity of modern health problems and health services. Existing health statistics require careful evaluation. Data from various sources must lend themselves to comparisons and co-ordination, and therefore be based on uniform standards, definitions, and terminology. There is a need to expand the resources to provide essential health statistical services in Canada; shortages of funds and qualified personnel must be overcome before any appreciable improvement can be made in the standards of health statistics in Canada. Statistics are a tool, however, and not an end in themselves.

Care must also be taken that the resources devoted to statistics are fully and efficiently utilized. This introduces the organizational aspect of the future health statistics system.

### *Statistical Organization*

In a nation in which the responsibility for health programmes rests with ten provincial governments the data required to assess these services and determine policy at the provincial and national levels must be organized as a co-ordinated system of health statistics.

The original data must come from the individual practitioner, institution, or programme. It is obvious, therefore, that much of the data will be available to the provincial agencies and that, in a number of instances, they will be processed, and statistics produced, by the provinces. And there may be instances when collection of health statistics becomes a joint federal-provincial project. But, whatever form the organization of health statistical compilations takes, the fact remains that it is at the provincial level—particularly for the purposes of the provincial Health Services Commissions and Planning Councils—that an immediate need for regional statistics will exist. Physicians, public health and visiting nurses, and hospitals are, of course, primarily concerned with providing services to their patients. They should not be overburdened with what they might consider as an undue amount of paper work. Modern recording methods, however, can substantially reduce the time spent in keeping records, and a large volume of the resulting data can be processed speedily if modern equipment can be brought to bear in a health statistics system.

The increasing application of electronic techniques to the processing of health statistics opens up vast new possibilities not only for obtaining additional data speedily, but also for the linkage and co-ordination of existing records. It also requires thorough planning to combine the greatest possible output with efficient use of available equipment. Because of their familiarity in matters of record design, data collection and processing, statistical agencies should, whenever possible, anticipate the statistical needs and advise programme administrators of the necessity to build into their operations an effective record system and statistical procedures. Statistical experts should not play a passive role but take the initiative by suggesting new uses of health statistics for analytical and policy purposes.

The ability of a province to collect the necessary statistics will depend upon its resources, and the assistance which it can obtain from the Dominion Bureau of Statistics. If the system of health statistics for Canada were to be based on the data that could be produced by the province with the least resources, the resulting statistics would be inadequate for other provinces and federal agencies. However, with the resources available through the Health Services Programmes plus the assistance of the Dominion Bureau of Statistics in the collection and processing of statistics as well as in the conduct of *ad hoc* studies and sample surveys, all provinces should be able to produce data sufficient for most needs.

In an era of rapid and profound changes in health problems and in the methods of dealing with them, our knowledge of these problems and of the services provided to deal with them must keep pace with these developments. In turn these needs must be reflected in a system of statistics that is at one and the same time comprehensive and flexible. To attempt to prepare a detailed blueprint for such a system of health statistics would be premature. This could only be done by careful and thorough planning. But what we wish to do is to set out in the pages that follow a broad outline of the objectives and possible organization of a health statistical system for Canada.

## A HEALTH STATISTICAL SYSTEM FOR CANADA

The provision of health services by a variety of professional personnel and organizations in ten different provinces is bound to result in a multiplicity of record systems. If these are to serve the objectives of medical research and evaluation of the quality of health care, a clearing house and co-ordinating agency such as the Health Sciences Research Council is absolutely necessary.

In establishing and maintaining a system of health statistics, the Health Sciences Research Council must perform an important role. At the provincial level statistical requirements will be determined by local and provincial health planning councils. Through the advice and guidance of the Health Sciences Research Council it will be possible to ensure that in meeting their own requirements, the provincial and local agencies produce data that are comparable with those produced by other provinces. Since the Council's functions include also guidance and consultation with local health planning councils, provincial Health Services Commissions, the Department of National Health, and the Dominion Bureau of Statistics and other departments of the Federal Government, it will be familiar with the statistical needs of all agencies in every province as well as those at the federal level including its own, and therefore will be in a good position to formulate proposals for statistical co-ordination.

In the planning and design of health statistics as a system, account should be taken of the experience gained elsewhere, notably in the United States where the establishment of the National Center for Health Statistics permits the integration of statistics from a variety of organizations whose activities it is intended "to supplement but not supplant".<sup>1</sup> Within the Center,

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<sup>1</sup> United States Department of Health, Education, and Welfare, Public Health Services; *Final Report of the Study Group on Mission and Organization of the Public Health Service*, Washington: United States Government Printing Office, 1960, p. 18.



the basis of general<sup>1</sup> health statistics is the National Health Survey which includes as one of its main components a household survey.

Evaluation procedures too must be built into the Health Services Programmes to facilitate a continuing assessment of the quality of care provided and the effectiveness with which this is accomplished. In carrying out its responsibilities at the local, provincial and federal levels the Health Sciences Research Council will be able to offer guidance to the Provincial Health Services Commissions in their evaluation of health services programmes. A co-ordinated system of health statistics is a vital part of any evaluation study. The Council's efforts in establishing and maintaining such a system will enable it to discharge effectively its responsibility for conducting or providing grants for research studies evaluating the effectiveness of the various elements of the Health Services Programmes at the national level.

Before a co-ordinated system of health statistics can operate effectively at the national level the present jurisdictional dispute between the Department of National Health and Welfare and the Dominion Bureau of Statistics must be resolved.<sup>2</sup>

The statistical activities of the Research and Statistics Division of the Department of National Health and Welfare are divided between studies undertaken by the division itself and statistical services and consultation provided to other branches of the Department, to other agencies and to the provinces. It has collected or analysed statistics regarding certain health problems and matters of health economics, as well as government and voluntary health care services. In addition, the Department has been responsible for the collection of data needed for the administration of various health grants, including the grants made under the Hospital Insurance and Diagnostic Services Act.

The principal statistical agency in Canada which is concerned with the collection, processing and publication of health statistics, without being responsible for the operating or administration of a specific health programme is the Health and Welfare Division of the Dominion Bureau of Statistics.<sup>3</sup> The Division routinely produces and publishes for Canada vital statistics, hospital statistics, mental health and tuberculosis statistics, and statistics on notifiable diseases.<sup>4</sup> Besides its publication programme, the Division answers

<sup>1</sup> These are statistics relating to health and health services generally, without being limited to specific programmes, particular diseases or health problems, or certain population groups.

<sup>2</sup> Other federal agencies responsible for the production of health statistics are the Department of Veterans Affairs and the Department of Labour. The Department of Veterans Affairs produces statistics relating to its health services and the Department of Labour provides statistics relating to vocational rehabilitation and work accidents. The principal statistical agencies are the Department of National Health and Welfare and the Dominion Bureau of Statistics.

<sup>3</sup> With three sections dealing with health statistics: Institutions Section, Public Health Section, and Vital Statistics Section.

<sup>4</sup> For a detailed list of the Bureau's publications see *Current Publications—Dominion Bureau of Statistics 1960*, Ottawa: Queen's Printer, 1960, and supplements.

requests for statistical information. Its work is supplemented by other divisions of the Bureau which produce data on the demographic and social aspects of the Canadian people. In the field of vital statistics the Bureau operates under a formal Federal-Provincial agreement within the Vital Statistics Council, established by Order in Council. In other areas of health statistics, the basis for collaboration with the provinces is limited to personal contact, *ad hoc* committees, and participation in working groups of the Department of National Health and Welfare.

During a period of rapid development in the health sciences and emergence of new patterns of health services, the lack of understanding and co-operation between these two departments has limited the necessary corresponding development of health statistics. Rather than dwell on the reasons for the present unsatisfactory situation, we would like to offer some constructive comments.

The Royal Commission on Government Organization (the Glassco Report) has taken note of the existing jurisdictional problem and recommended that it be settled by the Treasury Board. It recommended generally, in regard to all national statistics, complete integration and co-ordination of the statistical system under the Dominion Bureau of Statistics.<sup>1</sup> At the same time, it stated that "the departments should be free to collect and process certain kinds of statistics themselves,"<sup>2</sup> but this should be confined to relatively small-scale work of experimental nature.<sup>3</sup> The Glassco Report also observed as an obstacle to effective collaboration between the Dominion Bureau of Statistics and other federal departments, that the Bureau has a statutory obligation to collaborate with all departments on statistical matters without a corresponding obligation to collaborate on the part of the other departments.<sup>4</sup> There the matter rests—unresolved.

<sup>1</sup> *The Royal Commission on Government Organization, Volume 3*, Ottawa: Queen's Printer, 1962, p. 38.

<sup>2</sup> *Ibid.*, p. 41.

<sup>3</sup> *Ibid.*

<sup>4</sup> The Dominion Bureau of Statistics is a federal agency whose sole function is the production of statistics, without any responsibility for formulating policies or administering specific programmes.

The Statistics Act (1948, c. 45, s. 1, as amended), revised Statutes of Canada, 1952, Volume IV, Chapter 257, establishes under the Minister of Trade and Commerce the Dominion Bureau of Statistics whose duties are:

"to collect, compile, analyse, abstract and publish statistical information relative to the commercial, industrial, financial, social, economic and general activities and condition of the people;

"to collaborate with all other departments of the government in the collection, compilation and publication of statistical records of administration according to any regulations;

"to take the census of Canada as provided in this Act; and

"generally to organize a scheme of co-ordinated social and economic statistics pertaining to the whole of Canada and to each of the provinces thereof."

The Act contains strict provisions for the preservation of the confidentiality and secrecy of statistical returns made to the Bureau.

This unsettled state of affairs manifests itself even in the field of hospital statistics which, on the whole, represent one of the few instances where some progress has been made. In this area, as in others, both federal agencies make diverse claims for jurisdiction, often leading to either conflicting or competing requests to the service agencies, resulting in a good deal of duplication in the work on the one hand and slow progress on the other. The Bureau's position is based on the provisions of the Statistics Act, the Department's claim on its Minister's responsibilities under the Hospital Insurance and Diagnostic Services Act. It appears to us that the basic question here is: should there be a central statistical agency like the Bureau or should each department concerned with some special area, such as the Department of National Health and Welfare, collect its own statistics?

There are pros and cons on either side.<sup>1</sup> The Glassco Commission has reviewed this matter and decided in favour of retaining and strengthening

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<sup>1</sup> A central statistical agency being divorced from policy-making decisions may be more objective and better suited to gear its programme to the statistical needs of all potential consumers, not only those of the federal department concerned; it provides an opportunity of integrating various statistical series (important also in connection with record linkage and sample design) and of generally organizing "a scheme of co-ordinated social and economic statistics pertaining to the whole of Canada and to each of the provinces thereof", as the Statistics Act puts it; it can better implement uniform concepts and classifications; it can more efficiently use resources of personnel and machines required in modern data processing. The subject matter department, on the other hand, has closer contact with the field, may be better aware of statistical needs, and be in a better position to proceed with statistical projects of its own without competing for priorities with statistical projects in other fields. In particular, it may be aware of the need to undertake a specific analysis at a particular moment of time, an awareness that arises from the need to evaluate objectives and formulate new approaches to problems.

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<sup>4</sup> (Continued from p. 145)

In addition to the foregoing general description of the duties of the Bureau, the Act specifies the following areas in which the Bureau shall produce statistics:

- Census of population and agriculture;
- Census of industry, construction, trading and service establishments, etc.;
- Carriers and public utilities;
- Criminal statistics;

The Act further lists the following matters in particular, on which the Bureau shall "collect, compile, analyse, abstract and publish statistics:

- (a) population;
- (b) births, deaths, marriages, divorces;
- (c) epidemiology, morbidity;
- (d) immigration and emigration;
- (e) employment, unemployment, payrolls, man-hours;
- (f) agriculture, horticulture, dairying, cold storage;
- (g) factories, mines and productive industries generally;
- (h) education;
- (i) public and private finance;
- (j) wholesale and retail trade and supplying of services;
- (k) hospitals, mental institutions, tuberculosis institutions, charitable and benevolent institutions;
- (l) prices and cost of living; and
- (m) any other matters prescribed by the Minister or by the Governor in Council."



the Bureau as the agency principally responsible for the collection of data. Accepting this judgment, how can the Bureau's role in the health field be clearly established and defined?

The enumeration of the Bureau's functions in the Statistics Act is bound to be dated by conditions at the time of the promulgation of the Act. It leaves open the responsibility for the collection of other health statistics such as medical care, home care and the social and economic implications of health and ill-health. These obviously cannot be divorced from epidemiology, morbidity, births, deaths, and hospitals. An amendment of the Act referring to health statistics in general rather than selected aspects of such statistics appears necessary. We agree with the Glassco Report that the Department of National Health and Welfare also will have to pursue some statistical activities. The division of labour, however, cannot be achieved by a listing of subjects to be dealt with by each agency because it will often be a question of scope rather than of subject matter. The aforementioned criteria contained in the Glassco Report would seem to be a logical guide but they cannot be more than a guide and they can be workable only if there is understanding and the will to co-operate on both sides.

Such an understanding is necessary because the Bureau cannot hope to produce adequate and useful health statistics without the support of the Department. Nor can the latter economically fill the gap without the Bureau's statistical resources. The Health Services Programmes cannot afford the luxury of duplicating statistical services.

We are fully confident that the department heads can create a climate of collaboration or failing this that they can be directed to do so by Treasury Board. The Bureau must, of course, accept and carry out its full responsibility with regard to health statistics while meeting the requirements of the Department of National Health and Welfare and other agencies. Claiming wide responsibility for health statistics while rejecting requests for statistical assistance on the grounds of lack of resources does not solve the problems Canadians face and with which the operating government departments are called upon to deal. The Bureau's needs for resources in terms of well-qualified professional staff (both in the subject matter field and statistical methodology) technical and clerical staff, modern mechanical equipment, and also the processing services<sup>1</sup> must be established and met if the statistics produced are to be adequate in coverage, quality, and timeliness.<sup>2</sup>

We visualize, however, that two measures may be necessary to enable the Bureau to fulfil its functions. We believe there is some merit in the complaint made by the Department of National Health and Welfare and

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<sup>1</sup> For example, typing, translation, editing, proof-reading and printing.

<sup>2</sup> See Volume I, Chapter 2, Recommendation 188, p. 83.

other health agencies that the Bureau with its multi-subject obligations relegates health statistical projects to a lower priority than they would receive otherwise. The Bureau, like any other government agency, has to function within a budget and within its limits has to accommodate demands for statistics from the various government departments and the public at large. When the question of priority between different projects arises, it should not be left to the Bureau to decide which should be carried out and which postponed or curtailed. It strikes us that an agency similar to the Central Commission of Statistics in the Netherlands could be a useful method "to protect government departments, the public and scientific institutions from improper interference with the collection and publication of statistics, and to maintain the objectivity and high scientific standards of the Bureau's work programme".<sup>1</sup>

We have already stated that a second prerequisite for the Bureau's proper function in the health field is some agency to determine the country's health statistical needs including those of the Department of National Health and Welfare as well as of other institutions or agencies. An agency of this type existed in Canada in the form of the Medical Advisory Committee to the Dominion Statistician.<sup>2</sup> This, unfortunately, has been allowed to pass into oblivion leaving the Bureau without effective liaison with the health agencies. We visualize that the Health Sciences Research Council will perform this function in the future. It would not only advise the Dominion Bureau of Statistics on the extent of the need for various types of health statistics, but it would also maintain close liaison with the Bureau to deter-

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<sup>1</sup> *The Netherlands Central Bureau of Statistics: Organization, Functions and Activities*, The Netherlands Government Printing Office, The Hague, 1960, p. 9.

NOTE: The Netherlands has a Central Bureau of Statistics which is attached to the Ministry of Economic Affairs. The above quoted description of its functions also notes that only the Central Bureau of Statistics collects, compiles and publishes statistical information pertaining to all social, economic and cultural activities in the country; and adds that with regard to a number of administrative ("secondary") statistics, the work is performed in co-operation with other government departments. This is the kind of co-operation which should prevail, for instance, in the field of hospital statistics.

In regard to the Central Commission of Statistics in the Netherlands, the statute provides (Art. 2):

"The Bureau cannot undertake any new statistical enquiries, issue new publications or discontinue existing enquiries and publications without the consent of the Central Commission of Statistics.

"On its own initiative or on the instruction of the Minister of Economic Affairs, the Central Commission of Statistics may instruct the Director of the Central Bureau of Statistics to collect, to process and to publish certain statistical data.

"The Director shall carry out these instructions, except that he has the right to appeal to the Minister with respect to instructions given by the Commission on its own initiative."

In Canada, this could become a function of the Committee of the Privy Council on Scientific and Industrial Research.

<sup>2</sup> With the Deputy Minister of National Health and Welfare as Chairman and the Director of the Bureau's Health and Welfare Division as Secretary.

mine if these needs were being met. If the Bureau failed to meet these needs the Council would ascertain the reasons so that it could make appropriate recommendations to the officials responsible for the Bureau's operations.

## CONCLUSION

In Volume I of our Report we have made certain observations and recommendations regarding health statistics in Canada. Because of the importance of statistical information in the field of health research, as well as in the administration of the health services, we have examined this subject in depth in this volume.

The objectives of statistics must guide their collection and processing, lest they degenerate into wasteful paperwork. The sources of health statistics are as varied as the agencies providing health services. There is a great need for co-ordination among these agencies in order to fill existing gaps, to assure comparability, to eliminate duplication, and to provide policy makers and administrators with the necessary basic information to make wise decisions and to carry them out.

This leads us to the recommendation<sup>1</sup> that the Health Sciences Research Council take a positive role "in developing and maintaining a continuing system of health statistics" including a dental health index. Health statistics can achieve maximum usefulness only if the experience of one programme, one area, one practice or institution can be compared with others *or* with some accepted norm which, in turn, may be the average for the universe of programmes, areas, practices or institutions. The linkage of records and statistics assumes increased importance the more complex the health problems and services become. All this requires basic uniformity, comparability, and co-ordination of statistics. Statistical requirements will, therefore, often go beyond the needs of a particular agency in its day-to-day operation.

The health statistical system of the future will have to serve the needs of the operating and financing agencies as well as those of the Health Services Commissions, the Health Planning Councils, and the Health Sciences Research Council.

This will require the co-operation of all the agencies concerned with the production of the source data, the collection, compilation and publication of statistics, and the use of these statistics. Flexibility still will have to be maintained in order to meet the statistical needs at the various levels and to adapt statistical projects to changing needs. At the federal level, the produc-

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<sup>1</sup> See Volume I, Chapter 2, Recommendation 184, p. 81.



tion of statistics by the Dominion Bureau of Statistics must be reconciled with the needs of the Department of National Health and Welfare and other agencies. In particular, we have recommended closer co-operation between these two main federal agencies concerned with health statistics. Their respective needs are not conflicting and we are confident that they can be resolved in a constructive manner.

In view of the great and continuing advances of scientific knowledge and technology in the field of statistics, it will be of the utmost importance that health statistics be designed to take full advantage of progress in this field. This will render possible many useful projects which in the past would have been unrealistic or too costly. It will provide more adequate and more up-to-date information than could be produced previously. At the same time the use of modern recording methods will ease the task of obtaining source data, and data processing and record linkage will, with the same amount of clerical work, or less, produce more and better statistics.

Thorough and continuing planning is needed to accomplish these objectives and to ensure that health statistics provide the answers to the questions arising in the sciences and to facilitate the planning, formulation, operation, and evaluation of health services. If this is done, the possibility of achieving the best possible health care for Canadians will be much enhanced.

## Voluntary Health Organizations

### INTRODUCTION

The substantial growth of voluntary health organizations in Canada and the support they receive reflects the increased concern of our society for the health of its citizens, and the belief that voluntary organizations can play an effective and responsible part in the provision of good health care. Public participation both financial and personal has increased steadily in organizations engaged in the promotion of health; the prevention of illness; the discovery, treatment and rehabilitation of the victims of disease and disability; the stimulation of scientific research; and the training of health personnel.

In Volume I of this Report we have referred to the significant contributions of voluntary organizations in the provision of health services for Canadians. Here we wish to examine this contribution in more detail, particularly the growth of various voluntary organizations, the services they provide, and the ways in which they are organized and financed as a prerequisite to an examination of their future role in the Health Services Programmes. In essence, we are presenting in this chapter an assessment of the past, present, and probable future roles of voluntary health organizations in Canada.

In our discussion we have dealt with the major activities of voluntary organizations but we have excluded voluntary hospitals and charitable foundations. It must be emphasized, however, that limitations of the available data prevent us from developing a detailed analysis of every organization. However, more information on individual voluntary organizations appears in the study prepared for the Commission on which this chapter is based.<sup>1</sup>

We have not specifically analysed the services of voluntary organizations according to whether these are provided free of charge to the patient

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<sup>1</sup> Govan, E. S. L., *Voluntary Health Organizations in Canada*, a study prepared for the Royal Commission on Health Services. Ottawa: Queen's Printer (*in press*).

or at a price. A shift of emphasis is taking place in that these organizations no longer provide services solely for the indigent but tend to provide them for all those needing such services, regardless of their income or means. With the implementation of the Health Services Programmes the role of the voluntary organizations should remain essentially unchanged though personal health services provided under the programmes will be paid for from their funds.

## DEVELOPMENT OF VOLUNTARY ACTIVITIES

The establishment of voluntary organizations to provide health services for Canadians began before Confederation. Community nursing, one of the earliest functions of voluntary organizations, was begun more than a century ago by religious orders in Quebec,<sup>1</sup> and the Nazareth Institute for the Blind was founded in Montreal in 1861. Schools for the blind were established in Halifax in 1870 and in Ontario in 1872 but the major impetus to the growth of voluntary agencies did not come until the end of the nineteenth century when the first national voluntary health organizations were established in Canada. These organizations began as outgrowths of organizations which had developed in the United Kingdom. Thus the Canadian Red Cross Society was first organized in 1896 as an overseas branch of the British Red Cross Society to provide aid to the sick and wounded in war,<sup>2</sup> the Victorian Order of Nurses was founded in 1897 with maternal and infant welfare as its primary objective, while branches of the St. John Ambulance Association were organized in various provinces to provide first-aid courses with a national organization being established in 1910. In 1896, the National Sanitarium Association was established by physicians and laymen to provide services for residents of Ontario. The medical profes-

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<sup>1</sup> Even before the middle of the nineteenth century voluntary organizations had implemented some of the principles of care in the community, continuing care, and rehabilitation. They were mostly conceived as welfare organizations and operated on a local basis. The following are but a few examples of such early agencies in Quebec. In 1843, the Azile de la Providence was founded in Montreal with home visits to the needy sick as one of its objectives. The same is true of the Convent Bethléem, founded in 1868. The Institution des Sourds-Muets, founded in 1848, provided instruction to the deaf-mutes in Montreal. Both the aforementioned Azile de la Providence and the Father Dowd Memorial Home, the latter founded in 1868, provided homes for the aged. Commencing in 1848, illegitimate children born at the Hôpital de la Miséricorde were taken care of by the Crèche de la Miséricorde.

<sup>2</sup> Porter, McKenzie, *To All Men—The Story of the Canadian Red Cross*, Toronto: McClelland and Stewart, 1960. In 1885, at the Battle of Batoche during the Saskatchewan rebellion, Dr. G. S. Ryerson, surgeon of the Tenth Royals, improvised the Red Cross insignia which he used on the battlefield while caring for the wounded. This was the first Red Cross flag flown in Canada. Dr. Ryerson was later instrumental in the establishment of the Canadian Red Cross Society. In 1896, the Canadian Branch of the British Red Cross Society was established at a meeting held in Toronto under the chairmanship of Dr. Ryerson and attended by Sir Frederick Borden, Sir Charles Hibbert Tupper and Colonel J. B. Maclean.



sion took a leading role in developing a national organization for the control of tuberculosis, and in 1900 the Canadian Tuberculosis Association was established.<sup>1</sup> In 1908, Catholic women established the St. Elizabeth Visiting Nurses' Association in Toronto. All these were responses to health problems which were outstanding at the time.

The First World War provided a further impetus to the growth of voluntary agencies. In 1917, the Canadian National Institute for the Blind was organized under the inspired leadership of Col. E. A. Baker, a blinded war veteran who had undergone some rehabilitation at St. Dunston's Hospital in England and who had joined the Braille Library in Toronto on his return. Through his ability to interest influential citizens he was able to obtain a national charter and remained as general secretary of the organization which promoted a national network of services for the blind and to some extent provided a model of comprehensive services to a group of the handicapped.

During and immediately after World War I the medical profession and laymen established an agency designed to combat the spread of venereal disease. Later this organization became the Health League of Canada with the primary function of disseminating health information and stimulating government action in the field of health. In 1918, the Canadian National Committee for Mental Health was established by businessmen to arouse widespread public support for the more humane care of the mentally ill in Canada; eventually this became the Canadian Mental Health Association.

In the inter-war period there was a slow but steady growth of the work of established organizations as well as the development of new voluntary agencies to deal with new health problems. In this development, the health professions and the general public and governments all played a part. The Canadian Red Cross pioneered the development of nursing services in many of the provinces and provided funds for many other voluntary agencies, while urging and assisting in the establishment of local health units. For example, when a public health nursing course was established at Dalhousie University

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<sup>1</sup>The Canadian Tuberculosis Association indicates that the founding dates of the provincial branches of the Canadian Tuberculosis Association were as follows:

British Columbia Tuberculosis Society .....	1904
New Brunswick Tuberculosis Association .....	1909
Saskatchewan Anti-Tuberculosis League .....	1910
Sanatorium Board of Manitoba .....	1929
Prince Edward Island Tuberculosis League .....	1936
Quebec Provincial Committee for the Prevention of Tuberculosis .....	1937
Alberta Tuberculosis Association .....	1940
Newfoundland Tuberculosis Association .....	1944
Ontario Tuberculosis Association .....	1945
Nova Scotia Tuberculosis Association .....	1946

These dates are those on which the associations were set up in their present form. Most of them, however, had been in being since the very early nineteen hundreds, usually on the basis of separate city associations.

in 1919, the Canadian Red Cross Society provided scholarships and \$25,000 to maintain several nurses in the field for a year. In addition to assisting this and other universities to provide professional training for the public health field, the Society undertook in 1923 to establish training courses in home nursing for the maintenance of family health by teaching household hygiene, health habits and principles of nutrition. As early as 1925 the Toronto branch of the Red Cross Society had begun to develop homemaker services through the establishment of a planning committee with representatives of the medical, nursing, social work and home economist professions. In 1930, the Health League of Canada established its Immunization Committee to inform the public concerning the use of diphtheria toxoid, while the Victorian Order of Nurses began to shift its operations to the provision of nursing care in the home for the chronically ill and those discharged from hospital. The Canadian Tuberculosis Association meanwhile began to include public education as a major aspect of its work.

Among the new organizations established at this time were those interested in the needs of crippled children. Between 1916 and 1922, a number of service clubs in Ontario, mainly Rotary, developed services for crippled children as their community service project, while in 1922 representatives of these clubs established the Ontario Society for Crippled Children to spread this work throughout the province. The Quebec Society of Crippled Children developed in a similar fashion. From these provincial organizations a national organization was established in 1938 with a federal charter under the name of the Canadian Council for Crippled Children. Another new organization, Alcoholics Anonymous, was established in 1935. This organization was founded on the belief that an alcoholic may be aided in his recovery by association with a former alcoholic and that the group reinforces the rehabilitation efforts of the individual. Consequently the organization of A.A. assumed the form of a number of independent groups in different communities.

The representations by voluntary health organizations led to the establishment in 1919 of the federal Department of Health. By giving a number of financial grants to the nationally organized, voluntary health promoting agencies, the Department established and recognized their place in the public health field. At the same time provincial departments of health were giving increasing help and recognition to the voluntary organizations. In this way, over the years, Canada developed patterns of co-operation between voluntary organizations, governments and the public. A leader in this development was the Canadian Red Cross Society. Having to re-orient itself to a peace-time role after World War I, the Red Cross Society, acting as an auxiliary to the federal Department of Soldiers Civil Re-establishment, first took on the task of helping veterans readjust to peace.

Organizations of health professionals in this period continued to stimulate the establishment of voluntary health organizations. In 1938, the Canadian Medical Association undertook to set up within its own organization a department of cancer control and to organize a citizen group, the Canadian Society for the Control of Cancer. From this development came the Canadian Cancer Society with action committees in all provinces.

With the outbreak of World War II there was an increased concern with the need to mobilize the entire labour force, including the disabled, and voluntary organizations began to extend their activities in this direction. In 1940, the Canadian Hearing Society was established primarily as a placement agency for the deaf and the hard of hearing.

During the war, voluntary associations that had formerly concentrated on meeting the needs of handicapped children began to turn their attention to the rehabilitation needs of the adult population. This process was continued after the war as voluntary associations recognizing that facilities, treatment procedures and needs of all handicapped had many common elements (particularly as their own patients and wards grew older) established organizations with broader terms of reference. The national organization dealing with crippled children removed its age limit on services and changed its name in 1954 to The National Council for Crippled Children and Adults. A number of provincial societies similarly followed suit, while some provincial societies made arrangements to transfer the care of the handicapped after age 18 to the Canadian Foundation for Poliomyelitis (established in 1948) which, with the diminished threat of polio, had expanded to serve other handicapped groups.

As we observed in Volume I of our Report the public interest in health has been enlarged in scope and given new force since the end of World War II.<sup>1</sup> Nowhere has the public interest been more manifest than in the growth of the voluntary health agencies. Urged on by a greater appreciation of need and an even greater optimism as to what medical science and skill could accomplish, more organized attacks on health problems were launched than in any earlier period of our history.

In their identification of new health needs and their search for solutions to such needs, voluntary agencies have continued to receive strong support from governments. Since 1948, the National Health Grants Programme has assisted voluntary organizations concerned with rehabilitation. In that year, a grant was made to the Canadian Arthritis and Rheumatism Society for its initial organization and assistance was provided to six provincial branches to equip and staff clinics. In 1953, the Medical and Rehabilitation Grant was created as one of the National Health Grants. Under

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<sup>1</sup> See Volume I, Chapter 1, p. 5.



this grant funds were made available which could be used for the establishment of voluntarily operated rehabilitation clinics. Such clinics as the G. F. Strong Rehabilitation Centre in Vancouver, the Rehabilitation Institute in Montreal, the Nova Scotia Rehabilitation Centre in Halifax, and others have received grants under this programme. Provincial governments also extended their support of voluntary agencies in this period increasing both the number and the amount of grants to provincial voluntary health organizations as well as by purchasing services provided by such organizations. The introduction of the Hospital Insurance and Diagnostic Services Act in 1957, coupled with later amendments relating to out-patient services, led to the transfer of certain responsibilities of voluntary organizations to the publicly financed hospital programme. This was, of course, in keeping with the role of voluntary organizations as the sponsors of health programmes designed to meet newly identified needs in the community which later could be met best on a more universal basis.

The medical profession too continued to provide an impetus to the establishment of voluntary agencies concerned with specific diseases. Medical practitioners and other professionals specially interested in the prevention and control of cardio-vascular disease were active in developing provincial foundations for research in this area. From these developed the Canadian Heart Foundation established in 1956.

One significant development in the post-war period has been the number of voluntary organizations, established by patients or the parents of afflicted children, which ultimately became national in scope. "Patient-member" organizations had existed previously such as, for example, the Canadian Council of the Blind (affiliated with the Canadian National Institute of the Blind), the Canadian Federation of the Blind, operating mainly in Quebec and Saskatchewan, and the Canadian Federation for the Hard of Hearing. In 1945, a group of paraplegic war casualties under the leadership of J. G. Counsell founded the Canadian Paraplegic Association to supplement the treatment services of the Department of Veterans Affairs and extend these services to civilians.

In 1948, the Multiple Sclerosis Society of Canada was incorporated as an organization of patients and friends dedicated to the support of research. Still another organization, the Muscular Dystrophy Association of Canada was founded by parents and friends who felt that because of the low incidence and non-infectious character of the disease this problem was being largely ignored. Other associations that began as "patient-member" organizations in this period include the Canadian Hemophilia Society, the Canadian Cystic Fibrosis Association, the Canadian Association for Retarded Children. Also in 1948, the Canadian Arthritis and Rheumatism Society was founded out of the combined concern of patients, experts and governments. At the urging of the Canadian Rheumatism Society, the Minister of National Health and

Welfare convened a conference of experts to discuss the "Control of Rheumatic Diseases in Canada". At a second conference attended by representatives of the provincial departments of health, university medical schools, professional organizations and the Red Cross Society, the voluntary organization was born.

Membership does not reflect the degree of public support enjoyed by voluntary organizations because much community support comes in the form of individual contributions to Community Chest or United Fund Appeals which then allocate funds to the various voluntary agencies. It is evident however, that a substantial number of Canadians actively participate in voluntary activities by maintaining membership, by actually providing services, and by participating in the administration of voluntary organizations. Table 6-1 summarizes the organization and structure of 28 national voluntary organizations.

It should be noted that membership figures shown in Table 6-1 have a different meaning for different organizations; the Canadian Cancer Society counts as members all persons donating one dollar or more, while St. John Ambulance lists only uniformed and trained members; the Canadian Heart Foundation includes individuals and organizations, while the Canadian Red Cross Society maintains enrolment numbers for the Junior Red Cross only. "Patient-member" organizations, on the other hand, draw their membership from those affected by, or concerned with, certain diseases or handicaps, nor is there always a clear distinction made. Some organizations do not indicate the extent of their membership. On the other hand, vast constellations of volunteers are organized in service clubs, auxiliaries, church and other groups which provide services in health areas.

Elsewhere in our Report<sup>1</sup> we have distinguished between the legal functions of the Colleges of Physicians and Surgeons and the Canadian Medical Association which, together with its sister organization l'Association des Médecins de Langue Française du Canada, and its provincial divisions, constitute the voluntary organizations of the members of the profession. In a similar way, the professional organizations of other health professions fulfil to a varying extent a dual role by licensing or registering qualified members and promoting the interest of their members. In both capacities, professional organizations have contributed greatly to the advancement of knowledge in their respective fields and to raising the professional standards of their members and thus the quality of service provided to the public. Our efforts to establish the conditions necessary for the best possible health care for all Canadians have been greatly helped not only by the evidence submitted by the health professional organizations but also by their active co-operation in our own studies. Representatives of the

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<sup>1</sup> See Volume I, Chapter 2, p. 31.

TABLE 6-1 ORGANIZATION AND STRUCTURE OF NATIONAL VOLUNTARY HEALTH ORGANIZATIONS, CANADA  
(1962 or nearest year)

Organization	Date Founded	Number of Provinces*	Branches Operating	National Head- quarters	Reported Member- ship	United Fund Par- ticipation	Federal Grants	Provincial Grants†
Canadian Red Cross Society.....	1896	10	1,152	Toronto	—	x	x	x
Victorian Order of Nurses.....	1897	10	119	Ottawa	0	x	x	x
Canadian Tuberculosis Association†.....	1900	10	175	Ottawa	—	x	x	x
St. Elizabeth Visiting Nurses Association.....	1908	1	2	Toronto	1,200	—	x	x
St. John Ambulance.....	1910	10	389	Ottawa	10,000	x	x	x
Canadian National Institute for the Blind.....	1917	10	48	Toronto	—	x	x	x
Canadian Mental Health Association <sup>b</sup> .....	1918	9	91	Toronto	137,000	x	x	x
Health League of Canada <sup>c</sup> .....	1919	1	2	Toronto	—	x	x	x
Canadian Federation of the Blind.....	1928	—	8	—	—	x	—	—
Canadian Mothercraft Society.....	1931	1	2	Toronto	0	—	—	x
Alcoholics Anonymous.....	1935	10	1,075	—	15,410	—	—	x
Canadian Cancer Society.....	1938	10	—	Toronto	—	x	—	x
Canadian Council for Crippled Children.....	1938	10	—	Toronto	—	x	—	x
Canadian Hearing Society.....	1940	1	3	Toronto	0	—	—	x
Canadian Council of the Blind.....	1944	—	—	Montreal	—	—	—	—
Canadian Paraplegic Association.....	1945	9	4	Toronto	2,000	—	x	x
Canadian Arthritis and Rheumatism Society.....	1947	8	80	Toronto	2,000	x	x	—
National Cancer Institute.....	1947	—	—	Toronto	—	—	—	—
Canadian Association for Retarded Children <sup>d</sup> .....	1947	9	—	Toronto	14,000	x	x	x
Canadian Foundation for Poliomyelitis.....	1948	10	32	Montreal	0	x	—	—
Multiple Sclerosis Society of Canada.....	1948	8	30	Montreal	9,600	—	—	x
Muscular Dystrophy Association of Canada.....	1950	7	—	Toronto	3,500	—	—	—
Canadian Heart Foundation.....	1952	9	—	Toronto	—	—	—	—
Canadian Diabetic Association.....	1953	—	30	Toronto	3,500	—	—	—
Canadian Hemophilia Society.....	1953	4	1	Toronto	300	—	—	—
Canadian Council on Alcoholism.....	1959	—	—	Toronto	—	—	—	—
Cystic Fibrosis Foundation.....	1960	—	—	—	1,120	—	—	—
Cerebral Palsy Association <sup>e</sup> .....	—	—	—	Toronto	—	x	—	x



\* Depending on the structure of the voluntary organization, the provincial groups are either branches of the national organization (e.g., Victorian Order of Nurses) or autonomous organizations (e.g., Alcoholics Anonymous).

† Based on briefs submitted to the Royal Commission on Health Services; data are not available for those organizations that did not submit briefs.

‡ Originally National Sanatorium Board, 1896.

<sup>a</sup> Originally Priory of the Most Venerable Order of the Hospital of St. John of Jerusalem.

<sup>b</sup> Originally Committee on Mental Health, later Canadian Council on Mental Health, adopted its present name federally incorporated in 1950.

<sup>c</sup> Originally Canadian Council for Combating Venereal Disease, later Canadian Social Hygiene Council.

<sup>d</sup> Federally incorporated in 1956.

<sup>e</sup> Several provincial associations joined administratively with the Canadian Rehabilitation Council for the Disabled in 1962.

NOTE: Dashes indicate incomplete data available.

SOURCE: Reports, pamphlets, and briefs submitted to the Royal Commission on Health Services.

professional organizations serve in many agencies in executive or advisory capacities. The journals published by these organizations serve both to disseminate technical information and to encourage research among their members.

The Canadian Medical Association, the professional organization of physicians in Canada, provides an example of the contributions these organizations make towards the improvement of health. Among the objects of the Canadian Medical Association is the promotion of "the medical and related arts and sciences".<sup>1</sup> The Act establishing the Association specifies among its objectives such matters as these:

"to aid in the furtherance of measures designed to improve the public health and to prevent disease and disability;

"to promote the improvement of medical services however rendered;

"to assist in the promotion of measures designed to improve standards of hospital and medical services;"<sup>2</sup>

This work is conducted by continuing or *ad hoc* committees such as those on maternal welfare, the medical aspects of traffic accidents, child health, cancer, nutrition, rehabilitation, aging, physical education and recreation. The Association was instrumental in the establishment of the Associate Committee on Medical Research of the National Research Council, the forerunner of the Medical Research Council, and in fact in the appointment of this Royal Commission on Health Services. It conducts studies into specific health problems and is making outstanding contributions to the quality of health services through the physician-supported Canadian Council on Hospital Accreditation and the Committee on Approval of Hospitals for the Training of Junior Interns, and in the training of nurses. We have already mentioned the work of the various committees of medical hospital staffs<sup>3</sup> and also the experience gained in the administration of medical care insurance by the profession-sponsored prepayment plans.<sup>4</sup> Committees of the Canadian Medical Association undertake to assess and approve Canadian Schools for Laboratory Technologists, Schools for Radiological Technicians and Schools for Occupational and Physical Therapists.

Dentists, nurses, pharmacists and other health professions have been rendering in their own fields valuable contributions to the improvement of health and health services. This is one of the main reasons why we are anxious to preserve free and self-governing professions<sup>5</sup> and, if anything, strengthen their capacity to improve the health services to the people of Canada.

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<sup>1</sup> Section 2(a) of the Act respecting the Canadian Medical Association.

<sup>2</sup> *Ibid.*, Sections 2(b), (c), and (e).

<sup>3</sup> See Volume I, Chapter 14, pp. 606 and 608.

<sup>4</sup> *Ibid.*, Chapter 2, pp. 29 and 30.

<sup>5</sup> *Ibid.*, Chapter 1, p. 12.

## CURRENT PROGRAMMES OF VOLUNTARY ORGANIZATIONS

Having traced the development of voluntary organizations we now turn to the examination of the activities of voluntary organizations at the present time with particular reference to emerging trends.

Broadly defined, the activities of voluntary health organizations continue to be the provision of services to patients, the health education of the public, the provision of funds for the education of health personnel, support of medical research, and action to obtain the expansion of government support in specific fields of health. Practically all voluntary organizations engage in the provision of services for patients, most engage in public health education and a few are substantially interested in the provision of funds for health research.

### *Direct Services to Patients*

The direct services given to patients by voluntary health organizations vary from province to province, and even within regions of provinces. In examining briefly the major fields where voluntary organizations operate, we pay particular attention to those areas that would be affected by our recommendations. These areas include case-finding, diagnosis, treatment and rehabilitation services; community nursing; homemaker services; blood transfusion services; the provision of sick-room supplies, home care equipment, appliances, transportation services, hostels and sheltered workshops.

#### CASE-FINDING, DIAGNOSIS, TREATMENT AND REHABILITATION SERVICES

Although public funds are now available to finance some of the activities carried out by voluntary organizations and in some cases emerging public institutions provide services formerly provided under voluntary auspices, the voluntary agencies continue to concern themselves with the early detection of diseases or case-finding. They are involved in diagnostic assessment and in the total evaluation of disabled persons to determine what services the organization should provide, or to refer the patient to other professional or public services. They may operate clinics for treatment or provide other means to achieve rehabilitation.

Case-finding, diagnosis, and the treatment of tuberculous patients continue to be a major field for voluntary effort. Diagnosis and case-finding remain a major concern of organizations dealing with the blind.

Alcoholics Anonymous co-operates with personnel in medicine, public health and correction agencies in achieving its goals. This organization has



a unique procedure to help those alcoholics that turn to it for help; it is based on five steps: (1) admission of alcoholism, (2) personality analysis and catharsis, (3) adjustment of personal relations, (4) working with other alcoholics, (5) dependence upon some higher power. Table 6-2 indicates the scope and distribution of the activities of Alcoholics Anonymous.

**TABLE 6-2 ALCOHOLICS ANONYMOUS, GROUP CONTRIBUTIONS TO GENERAL SERVICE OFFICE, CANADA AND PROVINCES, 1963**

Province	Number of Groups Reported	Number of Groups Contributing	Amount of Contribution	Membership	Contributions per Capita
			\$		\$
Newfoundland.....	10	7	256	139	1.84
Prince Edward Island.....	11	5	316	198	1.60
Nova Scotia.....	47	25	1,028	532	1.93
New Brunswick.....	30	17	528	484	1.09
Quebec.....	210	71	1,669	3,730	.45
Ontario.....	346	196	8,572	4,931	1.74
Manitoba.....	57	31	1,826	1,155	1.58
Saskatchewan.....	88	53	2,311	1,020	2.26
Alberta.....	109	59	3,424	1,066	3.21
British Columbia.....	161	81	4,943	2,121	2.33
Yukon.....	3	1	59	24	2.46
Northwest Territories.....	3	2	36	10	3.56
CANADA .....	1,075	548	24,968	15,410	1.62

SOURCE: Based on *Conference Digest, 1964*, Fourteenth Annual General Service Conference of A.A., New York City, April 21-26, 1964.

For those health problems where medicine has as yet found only limited or no means of effective treatment or cure, or where there remain residual disabilities, health programmes must be directed towards utilizing available techniques to teach the disabled to live within the limits of their disabilities, but to the fullest possible extent of their capabilities. Among these areas are the diseases of the heart and the circulatory system, arthritis and rheumatism, cerebral palsy, multiple sclerosis and other crippling diseases. It is the concepts and techniques of rehabilitation which are brought to bear particularly in these fields.

As we have indicated earlier, voluntary organizations have a long history of meeting the needs of Canadians in this area and continue to do so. Despite the expansion of government rehabilitation programmes for disabled Canadians, voluntary organizations participate in the provision of

services of one form or another. They concentrate on the treatment of certain categories of patients and on the development of services for them. Voluntary organizations operate rehabilitation clinics in major cities. Although general hospitals have now assumed the operating responsibility for 25 clinics established by the Canadian Arthritis and Rheumatism Society, the Society continues to operate stationary and mobile clinics in many parts of the country. The development of travelling clinics reflects the specific concern of voluntary organizations with the provision of services for patients remote from other rehabilitation services. For example, the provincial societies for the Care of Crippled Children and Adults conduct special medical and diagnostic review clinics in areas outside metropolitan centres. The capital costs of rehabilitation centres established throughout Canada also continue to be met, in part, through the voluntary organizations.

In addition to providing these services, voluntary organizations pay medical, surgical and prosthetic expenses on behalf of sponsored patients in all provinces. Where government has assumed the cost of treatment, auxiliary services such as transportation, the provision of hostels for patients undergoing protracted treatment in out-patient clinics or at distant medical centres continue to be mainly the responsibility of voluntary organizations.

Finally, these organizations have, in certain instances, assumed quasi-official status, as the organization responsible for the operation and development of rehabilitation services. The Manitoba Society for Crippled Children and Adults carries out all such activities (except rehabilitation services for the tuberculous, the blind, persons covered under the Workmen's Compensation Act and Treaty Indians) and finances its activities through the government medical rehabilitation grant made under the National Health Grants, and with funds from the Vocational Training Grant as well as the proceeds from the voluntary Easter Seal and March-of-Dime campaigns.

#### COMMUNITY NURSING

Voluntary health organizations supply a substantial portion of home nursing services by providing families, industry and governments with the services of a visiting nurse as needed. Foremost in this activity is the Victorian Order of Nurses that provides home nursing services in all the provinces, except in Prince Edward Island. The Order operates in areas that include 51 per cent of the Canadian population, the proportion of covered population ranging from 25 in Newfoundland to 54 in Manitoba. Although most branches are situated in urban areas, steps have been taken to extend the service to outlying areas. Other associations which provide home nursing care are also concentrated in urban areas. They include The St. Elizabeth Visiting Nurses' Association of Toronto and Hamilton, and the Société des Infirmières Visiteuses in Quebec. This last organization operates in Montreal

and in three other areas and serves an area with a population of nearly 1,500,000.

Nurses of the Victorian Order provide bedside nursing to the sick in their homes and to convalescents following hospitalization; antenatal, individual and group instruction; as well as postnatal health supervision for mothers and babies; school health nursing, and part-time occupational nursing in small industries. Nurses may also be found in Children's Aid Societies, Crippled Children's Clinics and Y.M.C.A. Camps. The nature and extent of their work has adapted itself to the changing needs of society and to the role of the nurse in the official agency. In 1963, maternity and newborn care represented 54 per cent of the total case load of the organization but accounted for only 18 per cent of nursing visits; medical and surgical cases, on the other hand, accounted for 46 per cent of all cases but for 79 per cent of all visits.

Through hospital referral programmes, the Victorian Order of Nurses has demonstrated that the presence in hospitals of a nurse familiar with services and facilities available in the community, promotes continuity of care for patients discharged to their homes. Thirty-six branches of the Victorian Order now operate hospital referral programmes while in some communities, notably in Toronto, Winnipeg, Moose Jaw, Saskatoon, and Ottawa, the hospital referral system dovetails with organized home care programmes in which the Order provides the nursing service and in some instances is the co-ordinating and administering agency of community-based home care plans.

#### HOMEMAKER SERVICES

Homemaker services are not a health service, but they perform a vital function in the support of health services by making it possible for the home to function when otherwise it would be interrupted by the illness of a member of the family. Thus, support for an ailing or disabled housewife may prevent the social and emotional breakdown of the family. Similarly, the care of the mentally retarded child in the home is made easier through the temporary relief of the parents. In many communities voluntary organizations other than those primarily interested in health sponsor such services. Family service agencies or child welfare agencies operate in this area since not only illness, but old age or desertion may deprive the home of the normal homemaker skills. In Toronto, Hamilton and Ottawa there now are independent visiting homemaker associations. In 35 communities the Red Cross offers the service. In Alberta and British Columbia the Canadian Cancer Society maintains a housekeeper service. The Poliomyelitis Foundation in Alberta also employs housekeepers. Government recognition of the importance of homemaker service may be seen in the Ontario Act to provide for the Services of Homemakers and Nurses which came into effect in August 1958.



## RED CROSS BLOOD TRANSFUSION SERVICES

The Blood Transfusion Service represents a giant national co-operative partnership between governments, universities, hospitals and a national voluntary body, the Canadian Red Cross Society. With the opening of the Quebec City depot in November 1961, the Blood Transfusion Service became completely national in scope.

This programme, endorsed by the Canadian Medical Association in 1949, is so organized that the provincial governments provide and maintain the premises, the Society supplies the technical staff and equipment, the Connaught Medical Research Laboratories at the University of Toronto receive and process into plasma blood not used 10-14 days after collection. The blood donated by Canadians in all walks of life is administered to patients in Canadian hospitals. The operation of the service involves: (1) the establishment of provincial blood transfusion depots, (2) the recruitment and screening of volunteer blood donors and collection of blood, (3) the supply of blood and fresh blood to hospitals, (4) blood products and blood protein fractions, (5) free Rh antenatal testing service with detailed serological investigations, (6) making available to federal and provincial departments of health gamma globulin for control of infectious diseases, particularly infectious hepatitis, (7) services to Armed Forces, (8) services to Civil Defence Programmes, (9) research, and (10) an agreement with the American National Red Cross, enabling American tourists in Canada to receive blood free of charge while reciprocally Canadian residents receive blood free of charge in American hospitals.

The extent to which a voluntary organization can call on the resources of citizens is evident from the following data. In the calendar year 1962, 4,491 clinics were held, which 795,226 donors attended. As indicated in Table 6-3, in 1962, almost three-quarter of a million bottles of blood were collected. There has also been an increase in the use of blood fractionation products. From 1961 to 1962, the use of these products by hospitals, with the issue of gamma globulin, practically doubled, from 4,481 vials to 8,302 vials.

**TABLE 6-3 BLOOD DONOR CLINICS: BOTTLES COLLECTED AND TRANSFUSIONS, CANADA, 1960-1962**

Year	Bottles	Transfusions (Patients)
1960.....	668,684	227,997
1961.....	679,319	242,484
1962.....	744,006	271,686

SOURCE: Based on Canadian Red Cross Society, *Annual Report*, 1962, Toronto: The Society, Table I, pp. 56 and 57.

## SICK-ROOM SUPPLIES, HOME CARE EQUIPMENT, APPLIANCES

With improved techniques for the care and rehabilitation of the chronically ill, and the increasing trend towards home care, the range of patient-aids is rapidly expanding. Patients in the home may require hospital beds, wheel-chairs, crutches, walkers, hoier lifts, weight apparatus, bathroom aid equipment and a host of other items.

The voluntary agencies have taken the main responsibility for the provision of such equipment to patients. In the past, government participation generally has been limited to public welfare assistance to indigents but more recently aid has been made available to persons who qualify for assistance under the Vocational Rehabilitation of Disabled Persons Act of 1962 and to the victims of thalidomide. In the Act there is provision for making available those articles which will restore disabled persons to economic usefulness but the Act does not apply to children, the aged or those with progressive diseases. For persons in these categories the voluntary agencies have been a major source of assistance.

The Red Cross Sickroom Supply Loan Service, originally modelled after the British Red Cross Society's Loan Cupboard, provides, on an emergency basis and with a limit of three months, sick-room supplies such as hospital beds, crutches, wheel-chairs and other items. These articles are available without charge to patients otherwise unable to obtain them and they are loaned on the recommendation of a physician or a visiting nurse. This is an emergency service only, and while helpful for as long as it is provided, has often posed a problem for chronic patients and the doctors, nurses, social workers and physiotherapists attending them, as there has been no standard community resource in Canada for sick-room supplies for those patients who can or must be cared for at home. The Cancer Society frequently directs patients to this Service and consequently assumes responsibility for patients requiring the equipment for longer periods. In some communities the Canadian Cancer Society stocks such equipment.

From funds raised locally, the Multiple Sclerosis Society provides crutches, wheel-chairs, invalid lifts, hospital beds and other items on permanent loan to patients and also undertakes to repair patient-aids. The Canadian Paraplegic Association through supporting organizations such as the Canadian Legion, The Red Cross, Kiwanis, Rotary and Kinsmen Clubs, provides wheel-chairs and other patient-aids. The patient services of the Muscular Dystrophy Association include provision for purchase and repair of wheel-chairs, mechanical aids, lifters and orthopaedic braces. In some regions the provincial office of the Association attempts to serve patients in areas where there is no local chapter, sometimes working through the public health authorities.

The Cystic Fibrosis Foundation procures for its members at considerably reduced cost inhalation therapy tents and inhalation masks. The tents are sold by the national office to the provincial groups and to two organizations active in this field but not affiliated with the national body. The Foundation has succeeded in obtaining remission of customs duties and sales taxes, and assumes responsibility for transportation, repair and maintenance. Depending on their ability, the parents pay a portion of the cost, and the balance is made up by "sponsoring groups or individuals". Since the parents of afflicted children are faced with long-term outlay for costly antibiotic drugs, the benefit derived from participation in the organization is self-evident.

By sending physiotherapists to the home, the Canadian Arthritis and Rheumatism Society has been able to adapt patient-aids to individual requirements. Mindful of the needs of the handicapped in the activities of daily living and of the often prohibitive costs of commercially prepared items such as ramps, splints, and raised toilet seats, the Society helps to measure and advise on construction of these items which may be built or improvised at little cost.

#### TRANSPORTATION SERVICES, HOSTELS, AND SHELTERED WORKSHOPS

There are other services, though not directly related to health, on which in many cases the efficient provision of health services nevertheless depends. Among these are the patient's transportation (either provided in kind or paid for), hostels, and sheltered workshops, in all of which voluntary organizations play a vital part.

We have already referred briefly to the provision of transportation services and hostels. Here we wish to draw attention to the extent to which those afflictions requiring periodic treatment call forth a substantial effort on the part of voluntary health organizations. For example, in the treatment of cancer, many patients are unable to bear the costs of staying for extended periods at distant centres for radiation therapy, while a transportation problem may exist even if the patient lives in the same area. The Canadian Cancer Society and the various provincial member organizations of the Canadian Council for Crippled Children and Adults provide transportation for the groups they serve. The St. John Ambulance in New Brunswick operates a service known as the "Invalid Transport Programme". While this programme was originally devised to meet needs in rural areas not served by commercial ambulance companies, there have been requests for this service from the three larger cities and some smaller communities. One pilot project has been set up in a community of 1,500 population. In other organizations throughout the country, volunteer workers continue to provide transportation for the people they serve, although not on such a formal basis. The cost of transporting patients from outlying areas is sometimes met by voluntary organizations where this is not borne by government programmes.



If those patients who have travelled a long distance for treatment are not to use scarce active treatment beds, some type of accommodation must be provided. The Cancer Society has developed such hostels, specializing in building and equipping temporary living quarters for ambulatory cancer patients undergoing radiation therapy. Hostels have been built in Vancouver, Toronto, Hamilton, and London with the operating costs being met by patient fees or by subsidies from local governments or voluntary organizations for those who cannot afford to pay. Similarly the Canadian Mental Health Association and the Canadian Association for Retarded Children, as well as other voluntary organizations, have encouraged the development of, and in some cases have built close to urban treatment centres, small self-contained residences for the mentally ill or the disabled.

The need for a "half-way house" when moving back into regular economic activity along with the inability of many persons to lead a normal

**TABLE 6-4 SHELTERED WORKSHOPS UNDER VOLUNTARY AUSPICES, BY CATEGORY, CANADA AND PROVINCES, FISCAL YEAR ENDING MARCH 31, 1963**

Province	Business Enterprises	General and Community	Blind	Mentally Retarded	Total
Newfoundland.....	—	—	1	—	1
Prince Edward Island.....	—	—	—	1	1
Nova Scotia.....	11	—	—	1	12
New Brunswick.....	—	—	1	—	1
Quebec.....	1	11*	11†	5	28
Ontario.....	—	17‡	15	30 <sup>a</sup>	62
Manitoba <sup>b</sup> .....	—	4 <sup>c</sup>	3	2	9
Saskatchewan.....	—	4 <sup>d</sup>	2	5	11 <sup>e</sup>
Alberta.....	—	3	2	2	7
British Columbia.....	—	2 <sup>f</sup>	5	2	9
CANADA.....	12	41	40	48	141

\* Mostly in Montreal.

† Two sponsored by the Canadian National Institute for the Blind, one by Montreal Association for the Blind, one by Association Canadienne Française des Aveugles, one by Institution des Aveugles.

‡ Ten clinics sponsored by March of Dimes.

<sup>a</sup> One Canadian Association for Retarded Children workshop offers service to all handicapped.

<sup>b</sup> In Manitoba there is an inter-agency Workshop Coordinating Committee.

<sup>c</sup> Society of Crippled Children and Adults.

<sup>d</sup> Salvation Army, Council for Crippled Children and Adults.

<sup>e</sup> In Saskatchewan the Canadian Association for Retarded Children and Council for Crippled Children and Adults have one joint workshop.

<sup>f</sup> One by British Columbia Foundation for Poliomyelitis and Rehabilitation.

SOURCE: Based on "Preliminary List of Sheltered Employment Facilities in Canada", prepared by Department of Labour, made available by the Department of National Health and Welfare.

working life has led to the establishment of institutions to supplement both special schools and vocational training institutes, that is, sheltered workshops which are operated almost exclusively by voluntary organizations. In 1963, almost 200 such institutions were operated in Canada. The services they perform may be sub-contracting of clerical and light assembly work, refinishing of discarded household articles for resale, and the manufacture of small articles. Some workshops provide services for work assessment and work-conditioning for pre-employment adjustment to work habits. They also frequently provide terminal sheltered employment for those who are so physically or mentally disabled that they can never be expected to obtain normal employment. The sheltered workshops in many instances were developed for retarded or otherwise handicapped youths and young adults who could no longer benefit from special schools. Table 6-4 shows the distribution of sheltered workshops in Canada by category and province according to the latest data available. The rapid rate of growth of these organizations is evident since the 141 workshops listed in 1963 compare with an estimated 60 in 1960. The most significant and most rapid gain has been made by the Canadian Association for Retarded Children which now has more workshops listed than either those for the blind or those in the general and community category.

Some indication of the contribution made by voluntary organizations in assisting the totally disabled to become productive members of society within the limits of their disability can be seen from Tables 6-4 and 6-5.

**TABLE 6-5** NUMBER OF PEOPLE EMPLOYED AND TOTAL SALES, CATERING DEPARTMENT, THE CANADIAN NATIONAL INSTITUTE FOR THE BLIND, CANADA AND PROVINCES, FISCAL YEAR ENDING MARCH 31, 1963

Division	Total Stands	Registered Blind Employees	Total Sales \$'000
Newfoundland.....	17	29	501
Maritimes.....	55	73	1,027
Quebec.....	39	54	1,720
Ontario.....	190	228	7,014
Manitoba.....	35	43	878
Saskatchewan.....	21	36	442
Alberta.....	38	64	958
British Columbia.....	56	77	1,309
CANADA.....	451	604	13,849*

\* Earnings of part-time and full-time registered blind employees amounted to \$1.1 million.

SOURCE: Based on "Preliminary List of Sheltered Employment Facilities in Canada", prepared by the Department of Labour, made available by the Department of National Health and Welfare.

These agencies represent only a few of the organizations active in this area but they indicate the growing interest of the Canadian public in this valuable operation.

### *Research and the Education of Health Personnel*

One area in which voluntary organizations have rapidly expanded their activities in recent years is that of the support of medical research and the training of research personnel. These activities, along with our recommendations in this area, are discussed in Chapter 4. Here we wish to make a brief reference to research and to the work of voluntary organizations as it relates to the education of professional personnel in the health field.

#### RESEARCH

The major purpose of several voluntary organizations is the support of medical research. In 1961, the Canadian Heart Foundation allocated \$998,107 to its fellowship and grants-in-aid programme; the Muscular Dystrophy Association provided \$279,822 and in 1963 supported 44 projects at a cost of \$325,687; the Multiple Sclerosis Society expended \$70,023; the Canadian Cancer Society, in 1960, allocated \$2,053,000 or 47.2 per cent of its total budget to research.

Moreover, organizations that formerly devoted their efforts mainly to patient care, rehabilitation, or to education are now including the support of research as part of their activities. Thus, the C. A. Baker Foundation of the Canadian National Institute for the Blind allocated \$75,000 to research in 1963. The Canadian Mental Health Association which launched five major research projects in the period 1959-1963 now maintains a research fund director to supervise the programme. Its expenditure for research in 1963 was \$26,299. The Canadian Tuberculosis Association is now formulating a long-term programme of research with suggestions to the provincial divisions to allocate up to 5 per cent of Christmas Seals revenue for this purpose. In 1963, the Canadian Cystic Fibrosis Association undertook a \$10,000 campaign for research funds to support genetic studies. The newly formed Rehabilitation Foundation for the Disabled, Ontario Branch, devoted \$10,000 out of its regular funds for research and obtained an additional \$45,000 from the Atkinson Foundation to investigate a method of pre-vocational training for severely handicapped children. The Canadian Hemophilia Society participates in clinical research and has also sponsored studies of the relationship between capillary fragility and bleeding.

#### EDUCATION OF HEALTH PERSONNEL

We have outlined also in Chapter 4 the assistance available from various voluntary sources for the training of health scientists entering a career in health research. In addition to sponsoring the training of research



personnel, the voluntary organizations have developed a wide-spread programme for the training of other health personnel.

The Canadian Cancer Society, the Canadian Arthritis and Rheumatism Society, and the Canadian Diabetic Society are among organizations that have provided financial assistance to physicians seeking special training in areas of interest to the specific organization, while La Ligue d'Hygiène Dentaire, with government assistance, has sponsored post-graduate training in dental hygiene for practising dentists. The Canadian Cancer Society and the Canadian Arthritis and Rheumatism Society have also financed the education of physiotherapists and technicians. The Poliomyelitis Foundation in Quebec and British Columbia has made grants to university schools of rehabilitation and physiotherapy.

The Victorian Order of Nurses awards about 50 bursaries annually with the recipients committed to work for one year in a position determined by the national office. Grants for advanced work have been given for administration, supervision and rehabilitation nursing. In 1961, 47 per cent of the organization's staff with specialized training had been recipients of the Victorian Order of Nurses' bursaries. The bursary programme of the Order undoubtedly explains, in part, its good staffing position. In 1960, the amount awarded was \$46,748 and in 1961 the amount was increased to \$49,138. In 1960, the St. John Ambulance Association established the Countess Mountbatten Bursary Fund for assistance to student nurses for post-graduate study or for some special field of nursing. At the end of 1962 the receipts for this fund were \$23,730, and \$4,556 had been disbursed. The Margaret MacLaren Memorial Fund is a national organization established to make awards to students of Nursing. Priority is given to those who have participated in the work of St. John Ambulance but others are also eligible. Four bursaries were awarded in 1964.

The Canadian Tuberculosis Association's support of professional education includes distribution of books, periodicals, and abstracts, as well as financial support of the Canadian Thoracic Society. The Canadian Mental Health Association has contributed to professional education in many different ways. A sub-committee of the Scientific Planning Council of the Association prepared a number of draft reports on psychiatric services in recent years.<sup>1</sup> The final report was published under the title *More for the Mind*. The Canadian Institute on Mental Health Services sponsored by the Canadian Psychiatric Association, and financed partly by Mental Health Grants, convened a committee of 150 delegates to consider these draft reports. The report of this committee stimulated a lively professional dialogue and paved the way for the national conference in March 1964,

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<sup>1</sup> Tyhurst, *et. al.*, *More for the Mind, A Study of Psychiatric Services in Canada*, Canadian Mental Health Association, Toronto: the Association, 1963.

sponsored jointly by the Canadian Mental Health Association, the Canadian Psychiatric Association, and the Canadian Medical Association, and dealt with the integration of psychiatry into all fields of medical practice.

The concern of the Canadian Association for Retarded Children in the appropriate training for specialists dealing with retardates has stimulated such institutions as the Children's Psychiatric Research Centre in London, Ontario. The Montreal Association for Retarded Children has launched as its centennial project a \$300,000 Education, Research and Staff Training Centre. The Saskatchewan Division has decided to sponsor a professorship in mental retardation at the University of Saskatchewan, associated with the chromosome research unit. In Nova Scotia, the Association has planned an Atlantic Centennial Research Centre for Mental Retardation, stressing the biochemical and genetic aspects. Other provincial divisions have undertaken model community programmes. Other ways in which the Association contributes to professional development in this field are through a continuing programme of professional staff recruitment and development. In December 1963, the Association convened a national conference of scientific and professional leaders in the field of mental retardation to guide future projects.

The Canadian Council on Alcoholism<sup>1</sup> recognizes the need for communicating up to date information on the latest developments in treatment for the training of physicians, social workers, psychologists, lawyers, clergy, and nurses, if these are to be adequately prepared for their responsibility in this field. The Alcoholism Research Foundation of Ontario has provided a manual of scientific information for professional speakers, and, at the request of the Ontario Department of Education a booklet, designed mainly for teachers of physical and health education in secondary schools.

### *Public Information, Health Education, and First Aid*

Health education, in its broadest sense, has always been a component of personal medical services. The physician, the dentist, and the nurse have always given medical advice or instruction to patients in carrying out preventive and treatment procedures. In the public health field, to a great extent in the past, public health officers enforced public health measures arising out of their knowledge of what was good for the people, "with reliance upon legal force whenever necessary".<sup>2</sup> This was possible in an era when

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<sup>1</sup>The Canadian Council on Alcoholism represents the Alcoholism Foundation of British Columbia, Alcoholism Foundation of Alberta, Bureau on Alcoholism, Department of Social Welfare and Rehabilitation, Saskatchewan, Alcoholism Foundation of Manitoba, Alcoholism and Drug Addiction Research Foundation of Ontario, Fédération des Maisons Domremy, Quebec, and the Nova Scotia Alcoholism Research Commission.

<sup>2</sup>Hanlon, John J., *Principles of Public Health Administration*, 3 ed. St. Louis: C. V. Mosby Company, 1960, p. 402.

individuals were regarded only as potential impediments to the implementation of wholesale preventive measures for the health of the community. Today, it is widely recognized that measures for attaining good health cannot be forced upon people, but when they are educated to their value, individuals will work to secure these benefits for themselves, their family, and their community. How this education is to be attained becomes a challenge for each community, and voluntary health organizations have moved to meet it. The activities of voluntary organizations in these areas continue to be the teaching of first aid, home nursing and child care, the development of educational programmes directed to the general public and to professional groups for the prevention of disease, and the dissemination of knowledge about good health practices and safety.

The responsibility for teaching home nursing and first aid for national preparedness is now shared by the Canadian Red Cross Society and the St. John Ambulance Association. The Association provides courses in senior home nursing, junior home nursing, senior child care, and junior child care, with these courses increasingly emphasizing the positive aspects of health education, accident prevention and home safety as well as simple basic skills for the care of the injured and the sick.<sup>1</sup> The Association is also responsible for all first-aid training for national preparedness in Canada, except Prince Edward Island and parts of Ontario where the Canadian Red Cross Society has provided this service since 1951. About 3,000 instructors conduct courses in first-aid, home nursing and child care. In addition, the St. John Ambulance also provides first-aid services at 174 first-aid posts maintained in five provinces, namely British Columbia, Saskatchewan, Manitoba, Newfoundland, and Ontario, one independently and three in co-operation with provincial motor leagues. The St. John Ambulance Brigade establishes, equips and staffs first-aid posts at fairs, exhibitions, organized sports events, and ski resorts. Thirty-three first-aid posts are maintained by the Society. A water safety programme is conducted by the Red Cross Society which trains instructors to set up and carry out programmes in communities across the country with volunteers assisting regular instructors at swimming pools, recreation centres and pools for the handicapped.

Accidents constitute only one of the major health problems. But while most others have to rely on medical science for a solution, the prevention of accidents is largely a matter of law enforcement, individual responsibility, and knowledge of safety measures. It is in this area, therefore, that voluntary effort can be expected to have a more immediate impact than in most other fields. The Canadian Highway Safety Council<sup>2</sup> has as its

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<sup>1</sup> In 1961, the Red Cross had 8,442 persons and the St. John Ambulance Association about 8,300 persons attending classes in home nursing.

<sup>2</sup> Continuing the activities of the National Highway Safety Conference, first convened in 1955.



objective the reduction of motor vehicle accidents.<sup>1</sup> It promotes legislation, education of the public, safety measures such as the use of seat belts, design of safe vehicles and roads, and highway accident prevention generally. The Council supports financially the National Safety League of Canada and the Traffic Injury Research Foundation.

The National Safety League carries out some of its functions in conjunction with the Canadian Highway Safety Council mainly in the fields of home, farm, child, and recreational safety. In the area of industrial safety, provincial health departments and workmen's compensation boards are assisted by the Industrial Accident Prevention Association, the Canadian Industrial Safety Association, and several province- or industry-wide organizations. The Red Cross Society and the St. John Ambulance also provide instruction in safety measures and in first-aid.

The Canadian National Institute for the Blind has an active programme for blindness prevention including dissemination of information through mass media education and the Wise Owl clubs now existing in 432 Canadian companies.<sup>2</sup> The Health League of Canada is concerned with industrial safety through its publications in the area of industrial health.

Having recognized accidents as a major cause of injury, death, and demand for health services,<sup>3</sup> it is important that the agencies concerned with their prevention, like the other voluntary health organizations, participate in the work of the Planning Councils we discuss in Chapters 7 and 8.

*The Commission recommends:*

**223. That agencies concerned with the prevention of accidents participate in the work of the Health Planning Councils at the various levels and in particular with regard to measures to prevent highway accidents.**

Other voluntary organizations also conduct extensive campaigns in the field of health education. The parental guidance and counselling service of the Canadian Association of Retarded Children is one example of health education. Hand in hand with this, a programme, making available pamphlets, films and speakers, has enlisted community support by increasing understanding of the nature and the extent of the problem. The Canadian Arthritis and Rheumatism Society, in describing its public information service, states that it is designed to stimulate public interest and understanding in both

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<sup>1</sup> Between 1961 and 1963, the number of fatalities from motor vehicle accidents in Canada has increased by 562 to a total of 4,444; the rate per 100,000 population climbed from 21.3 in 1961 to 23.6 in 1963. We have estimated the cost of health services due to all accidents as close to \$75 million in 1961. See Volume I, Chapter 5, p. 216.

<sup>2</sup> The Wise Owl clubs were established in co-operation with Industrial Safety Council in 1961. Membership is given as an award to a person who averted eye injury by taking precautions.

<sup>3</sup> See Volume I, Chapter 5.

arthritis and the work of the Society, using a variety of media, with emphasis on the warning signs to encourage early diagnosis and treatment. The literature and films are aimed at different audiences, namely members and friends, patients, the general public, and family physicians and specialists in rheumatology or psychiatry to whom it also distributes pathological and clinical slides.

The Muscular Dystrophy Association publishes a quarterly newspaper, the *Muscular Dystrophy Reporter*. The 47 home teachers of the Canadian National Institute for the Blind provide a service in health education to the partially sighted and newly blinded as well as to their families.

Health education is high on the list of activities of the Canadian Diabetic Association. Included in this category are diet counselling, summer camps which seek to establish appropriate regimes, patient clubs, manuals, educational meetings, a quarterly newsletter as well as a school for diabetics which has been sponsored in Moncton, New Brunswick. The approach taken by the Canadian Paraplegic Association is to demonstrate the ability of the paraplegic to compensate for disability by use of intelligence and development of residual skills. Thus athletic teams have been an element in public education of the potential of the handicapped. The Canadian Mental Health Association has done a very competent job of fostering principles of mental health and removing some of the stigma attached to mental illness. This has been accomplished to some degree by mass media but more effectively through mental health workshops and study groups and through the involvement of volunteers in communities who are daily removing the barriers between the mental hospital and the community.

In its cancer prevention programme, the objective of the Canadian Cancer Society has been to acquaint the public with symptoms that may be significant and to lead physicians to undertake routine cytological examinations of women patients. The success of its education programme can be judged by the findings of public opinion polls which indicated that the proportion of women interviewed who know that cancer is not necessarily incurable rose from 63 to 71 per cent over the period 1954-1960, while in the same period the proportion that recognize the need for early treatment rose from 80 to 87 per cent. Currently, the Society is attempting to educate people about the hazards of cigarette smoking. Health education programmes in this area require careful co-ordination and planning between health and education authorities as well as the enlistment of voluntary agencies to reach the young persons vulnerable to the hazards of smoking. It is precisely in the area of motivating persons to change their behaviour that more refined techniques of education must be learned and applied.

The Canadian Hemophilia Society publishes a news bulletin entitled "Hemophilia Today" which combines organization news with development in the field. In 1963, the Society agreed with the Canadian Rehabilitation

Council for the Disabled that certain phases such as information and channelling research projects would be undertaken in the near future by the Council. The Canadian Heart Foundation makes available non-technical information for the general public through "Pulse", a monthly news bulletin, as well as through speakers, pamphlets, radio and television announcements, and literature distributed through the provincial health and welfare departments. There is no direct service to patients; consequently, no direct health education programme aimed at them.

La Ligue d'Hygiène Dentaire de la Province de Québec, established in 1942 as a committee of the Quebec College of Dental Surgeons, aims its education programme at the promotion of dental hygiene and the prevention of dental disease. It concentrates on those persons who are thought to have the greatest responsibility for the health of young children: nurses, mothers, and teachers.

While most voluntary health organizations employ persons for publicity or public relations purposes, very few have made it a practice to employ health education specialists. The Canadian Tuberculosis Association has had a health education consultant on its staff since 1943. The Ontario Tuberculosis Association, the Canadian Mental Health Association, the British Columbia Alcoholism Foundation and the Canadian Junior Red Cross have employed health education specialists as executive directors or programme directors.

The Health League of Canada continues to emphasize its primary aim of disseminating health information and popular health education in the field of prevention. Its main publication "Health" is published bi-monthly, partly in French, and reaches a paid circulation of approximately 35,000 which includes about 12,000 medical practitioners. The Canadian Life Insurance Officers Association has undertaken to supply complimentary subscriptions to all general medical practitioners across the country.

The League whose role is primarily educational has consistently campaigned for improved legislation in health matters. It has urged the passage of laws making pasteurization of milk universal in Canada, and taken a determined stand on the issue of fluoridation and dental health.

## SOURCES AND DISTRIBUTION OF FUNDS

An analysis of the financial structure of voluntary health organizations can only be done in a limited fashion. Financial data were not available for many provincial organizations or available only in summary form for many others. As a consequence, the data relating to sources and distributions of funds of voluntary organizations which we present here are incomplete.



However, they do include the major voluntary health organizations in Canada and, therefore, are indicative of the magnitude of support that Canadians provide for these activities. It must be emphasized that most voluntary organizations do not follow a standardized accounting procedure and the various reporting systems they use make comparisons of institutions a difficult task. However, we believe that the data we present provide a reasonable picture of how voluntary organizations distributed their funds in 1963.

### *Sources of Funds*

Voluntary organizations derive their income from a variety of sources: donations made by the public directly or through federated funds,<sup>1</sup> payment by governments for services rendered, grants from governments, payments by the public for health services, interest on investments and other minor sources.

Grants by the Federal Government are made to support the activities of a number of voluntary organizations. As Table 6-6 shows, 16 organizations received grants in 1963 varying in amount from \$1,400 to \$55,000. Federal Government support to voluntary health organizations is contingent upon recommendation by the Department of National Health and Welfare. This provides the organization with recognition of the usefulness of its endeavours. It qualifies the organization for the receipt of a federal grant and also is helpful in campaigns for public support. Thus, apart from their monetary value, these grants have the effect of enhancing the status of the organization. Once established, the grants are continued subject to a review of the organizations' annual reports. Some organizations such as the Canadian Heart Foundation and the National Cancer Institute do not receive grants under this category but may receive support from the Federal Government directly or indirectly as, for instance, through research grants.<sup>2</sup>

Since they purchase a large amount of health services from voluntary organizations, provincial governments are a substantial source of government support to the voluntary organizations. In addition, they too may allocate grants in recognition of the functions of a particular association. The same policy is followed by some municipalities.

Table 6-7 summarizes grants and payments received by voluntary agencies from governments at all levels. Of the 12 organizations for which data are available, 3 show no direct government financial support in 1963

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<sup>1</sup> A federated fund is a community appeal which is made jointly by a group of voluntary organizations, usually from both the health and welfare fields, and which is centrally administered. The receipts of the fund are distributed among members on the basis of an agreed formula.

<sup>2</sup> The Canadian Red Cross Blood Transfusion Service receives financial support from the provincial governments under their Hospital Insurance plans equal to approximately 50 per cent of the technical cost of the service (i.e., excluding the cost of donor procurement).

while the remainder received grants which varied between .7 per cent of total income (Canadian Cancer Society) and 29.8 per cent (Canadian Paraplegic Association), with the average for the 12 organizations being 14.1 per cent of total income. A comparison of Table 6-6, Federal Grants to Voluntary Health Organizations, 1963, with the "Government Grants" column of Table 6-7, indicates the level of support by federal and provincial governments. For example, the Victorian Order of Nurses received \$833,000 in government grants of which \$20,000 was from the Federal Government, the Canadian Paraplegic Association received \$78,000, of which \$15,000 was from the Federal Government, and the Canadian National Institute for the Blind received \$380,000 of which \$55,000 was from the Federal Government. It is possible that, apart from the grants shown in Table 6-6, other government assistance was received but it cannot be identified.

**TABLE 6-6 FEDERAL GRANTS TO VOLUNTARY HEALTH ORGANIZATIONS, CANADA, 1963**

Organization	Amount of Grant
	\$
Canadian Mental Health Association.....	15,000
Health League of Canada.....	15,000
Canadian Public Health Association.....	7,500
Canadian National Institute for the Blind.....	55,000
L'Association Canadienne Française des Aveugles..	6,000
L'Institut Nazareth de Montréal.....	4,050
Montreal Association for the Blind.....	4,050
Canadian Tuberculosis Association.....	20,250
Victorian Order of Nurses.....	20,000
St. John Ambulance.....	15,000
Canadian Red Cross Society.....	10,000
Canadian Paraplegic Association.....	15,000
Canadian Association for Retarded Children.....	5,000
Commonwealth Council for Royal Life Saving Society.....	1,400
Canadian Highway Safety Council.....	25,000
Canadian Rehabilitation Council.....	7,000
<b>TOTAL.....</b>	<b>225,250</b>

SOURCE: Data supplied by the Department of National Health and Welfare.

The voluntary health organizations derive most of their income from public donations. These gifts are made in various forms: direct donations to the agency by an individual or corporation, bequests, payments for memberships and contributions to federated funds. Table 6-7 shows that the organizations listed obtained about 70 per cent of their total income from these sources.

TABLE 6-7 INCOME AND EXPENDITURE: SELECTED NATIONAL VOLUNTARY ORGANIZATIONS, CANADA, 1963

Organization	Income					
	Government Grants	Federated Funds	Interest from Securities Investments	Donations, Memberships and Bequests	Other	Total Income
Canadian Arthritis & Rheumatism Society.....	\$ 167,000	600,000	30,000	290,000	135,000	1,222,000
Canadian Cancer Society.....	\$ 13.7	49.1	2.4	23.8	11.0	100
Canadian Diabetic Association.....	\$ 30,000	69,000	65,000	4,170,000	—	4,334,000
Canadian Heart Foundation.....	\$ .7	1.6	1.5	96.2	—	100
Canadian Mothercraft Society.....	\$ —	—	—	72,000	23,000 <sup>d</sup>	95,000
Canadian National Institute for the Blind.....	\$ —	47,000	69,000	1,197,000 <sup>e</sup>	24.3	100
Canadian Paraplegic Association.....	\$ 11,000	2.7	4.0	69.4	23.9	100
Canadian Red Cross Society.....	\$ 12.2	—	36,000	6,000	40,000	93,000
Health League of Canada.....	\$ 380,000	1,129,000	138,000	959,000	42.6	100
Multiple Sclerosis Society.....	\$ 14.6	43.3	5.3	36.8	—	2,606,000
Muscular Dystrophy Association.....	\$ 78,000	—	6,000	106,000	—	100
Victorian Order of Nurses.....	\$ 29.8	—	2.1	40.5	72,000 <sup>l</sup>	262,000
TOTAL.....	\$ 1,987,000 <sup>n</sup>	2,703,000	145,000	3,426,000	27.6	100
	\$ 20.0	27.3	1.5	34.6	1,643,000	9,904,000
	\$ 14.8	51.0	2,000	24,000	16.6	100
	\$ 5,000	29,000 <sup>u</sup>	1.2	15.5	27,000 <sup>r</sup>	154,000
	\$ 4.2	24.5	.2	85,000	17.5	100
	\$ —	115,000	21,000	71.1	—	119,200 <sup>s</sup>
	\$ —	25.6	4.6	312,000	—	100
	\$ 833,000	1,579,000 <sup>u</sup>	98,000	220,000	1,309,000 <sup>v</sup>	4,039,000
	\$ 20.6	39.1	2.4	5.4	32.5	100
TOTAL.....	\$ 3,514,000	6,349,000	610,200	10,867,000	3,661,000	25,001,200
	\$ 14.1	25.4	2.4	43.5	14.6	100



TABLE 6-7 INCOME AND EXPENDITURE: SELECTED NATIONAL VOLUNTARY ORGANIZATIONS, CANADA, 1963—  
(Concluded)

Organization	Expenditure					Surplus or Deficit (+ or -)
	Patient Services	Research	Public Education	Adminis- tration	Other	Total Expenditure
Canadian Arthritis & Rheumatism Society \$	765,000	232,000	63,000	190,000	41,000 <sup>a</sup>	1,291,000
%	59.2	18.0	4.9	14.7	3.2	100
Canadian Cancer Society.....\$	624,000	2,032,000	770,000	538,000 <sup>b</sup>	175,000 <sup>c</sup>	4,139,000
%	15.1	49.1	18.6	13.0	4.2	100
Canadian Diabetic Association.....\$	24,000	21,000	10,000 <sup>e</sup>	33,000	9,000	97,000
%	24.8	22.1	10.3	33.6	9.2	100
Canadian Heart Foundation.....\$	—	1,180,000	183,000 <sup>g</sup>	245,000 <sup>h</sup>	—	1,608,000
%	—	73.4	11.4	15.2	—	100
Canadian Mothercraft Society.....\$	16,000	—	1,000 <sup>i</sup>	82,000	—	99,000
%	16.0	—	.8	83.2	—	100
Canadian National Institute for the Blind..\$	2,547,000 <sup>j</sup>	—	—	382,000	125,000 <sup>k</sup>	3,054,000
%	83.4	—	—	12.5	4.1	100
Canadian Paraplegic Association.....\$	200,000 <sup>m</sup>	—	—	97,000	—	297,000
%	67.3	—	—	32.7	—	100
Canadian Red Cross Society.....\$	7,385,000	—	1,296,000	889,000 <sup>o</sup>	279,000 <sup>p</sup>	9,849,000
%	75.0	—	13.2	9.0	2.8	100
Health League of Canada.....\$	—	—	58,000	51,000	37,000 <sup>r</sup>	146,000
%	—	—	39.6	35.3	25.1	100
Multiple Sclerosis Society.....\$	4,000	71,000	6,000	23,000	—	104,000
%	4.2	68.4	5.7	21.7	—	100
Muscular Dystrophy Association.....\$	26,000	326,000	19,000 <sup>t</sup>	85,000	—	456,000
%	5.8	71.4	4.2	18.6	—	100
Victorian Order of Nurses.....\$	3,399,000	—	4,000	708,000	48,000 <sup>w</sup>	4,159,000
%	81.7	—	0.1	17.0	1.2	100
TOTAL.....\$	14,990,000	3,862,000	2,410,000	3,323,000	714,000	25,299,000
%	59.3	15.3	9.5	13.1	2.8	100

SOURCE: Annual Reports of the Selected Agencies, 1963. National Agency Review Committee (NARC) reports, 1964, for fiscal year 1963. Canadian Welfare Council, Allocations to National Organizations by Canadian Community Funds, 1963.

- <sup>a</sup> Professional information service.
- <sup>b</sup> Profudes cost of fund raising—\$239,000.
- <sup>c</sup> Grants to provincial cancer foundation.
- <sup>d</sup> Includes \$5,000 from sale of publications and \$5,000 from research.
- <sup>e</sup> Agency titles this "education and publicity".
- <sup>f</sup> Canadian Heart Fund 1963 campaign receipts.
- <sup>g</sup> Agency titles this "professional and public education".
- <sup>h</sup> Includes cost of fund raising—\$125,000.
- <sup>i</sup> Agency titles this "advertising and publicity".
- <sup>j</sup> Includes \$829,000 for salaries for field workers and blind field secretaries.
- <sup>k</sup> Operation of a braille and recorded book library.
- <sup>l</sup> Revenue from the sale of wheelchairs and prosthetic devices, and revenue from patients.
- <sup>m</sup> Includes salaries of rehabilitation staff.
- <sup>n</sup> Most of these grants are the government's share of the technical cost of the blood transfusions service—\$1,971,000.
- <sup>o</sup> Includes campaign expenses and supplies—\$433,000.
- <sup>p</sup> International work.
- <sup>q</sup> Received from Greater Toronto United Appeal.
- <sup>r</sup> Revenue and expenditure on Health magazine.
- <sup>s</sup> Chapters retain \$4,000 for patient services.
- <sup>t</sup> Agency titles this "public and professional information".
- <sup>u</sup> These are the figures as supplied by the national organization.
- <sup>v</sup> Nursing fees—\$1,271,000.
- <sup>w</sup> Expenditure on bursaries—\$40,000.

Table 6-7 indicates that those organizations which join federated funds derive a significant proportion of their income from this source. Of the 12 organizations which are full participants, the range varied from 27.3 per cent (Canadian Red Cross Society) to 51.0 per cent (Health League of Canada) of their total income.<sup>1</sup> The Canadian Heart Foundation and the Canadian Cancer Society are members in a few communities only and therefore derive only 2.7 per cent and 1.6 per cent of their respective incomes from this source. In 1963, there were 115 federated funds operating in Canada. Chart 6-1 and Chart 6-2 indicate that of the \$25.4 million collected in 1963 by the funds for all purposes, almost \$8 million was allocated to health organizations. The smaller organizations have benefited especially by this method of fund raising as they have been able to avoid mounting their own financial campaigns. The large organizations increasingly have joined these common drives because of the growing use of the payroll deduction method of voluntary giving to federated fund appeals in various communities.

The largest single source of income for voluntary health organizations is the donations of individuals and corporations. Organizations which are not members of federated funds depend on this source more heavily than member organizations. From the data available, it was not possible to separate the amount given by corporations from the total donations for each organization.<sup>2</sup> The importance of combined corporate and individual donations for those organizations not extensively members of federated funds may be seen in Table 6-7. For example, the Canadian Cancer Society in 1963 derived 96.2 per cent of its income from private and corporate donations (including membership fees and bequests), and the Canadian Heart Foundation derived 93.3 per cent from these sources. However, even where the organization is a member of federated funds, donations in various forms by the public or corporations still constitute a large part of its income. Table 6-7 shows that for the 12 organizations the average proportion of income from this source was 43.5 per cent. The Victorian Order of Nurses is an exception to the general rule in that it received only 5.4 per cent of its income from direct public donations. The explanation is that in view of the services it renders the Order receives some payment for its services either from patients or from governments on their behalf.

The final major category of income used in Table 6-7 is the category "other", which includes miscellaneous income and income derived from

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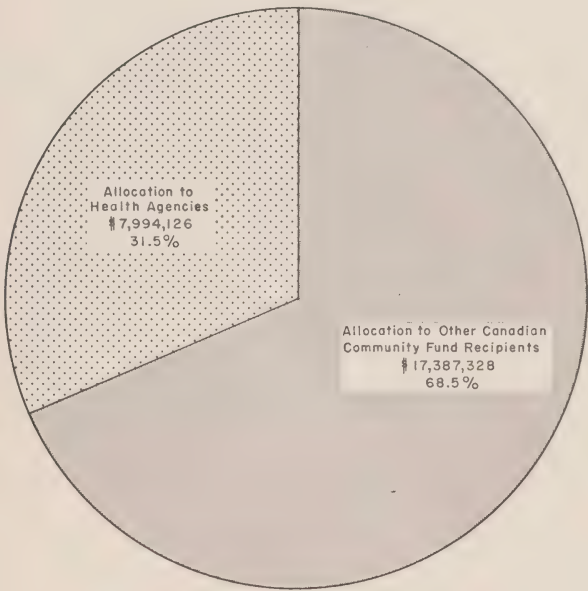
<sup>1</sup> The Canadian Diabetic Association, Canadian Hemophilia Society, the Canadian Hearing Society, the Canadian Mothercraft Society, the Canadian Cystic Fibrosis Foundation and the Canadian Paraplegic Association do not participate. The Canadian Heart Foundation and the Canadian Cancer Society are members in only a few communities.

<sup>2</sup> From 1950 to 1959 corporate charitable donations (to health and welfare) rose from \$23.7 million to \$42.4 million. In the same period individual donations rose from \$100 million to \$380 million. See Watson, J. H., Douglas, M., *Company Contribution in Canada*, National Industrial Conference Board, Montreal, 1963.



CHART 6-1

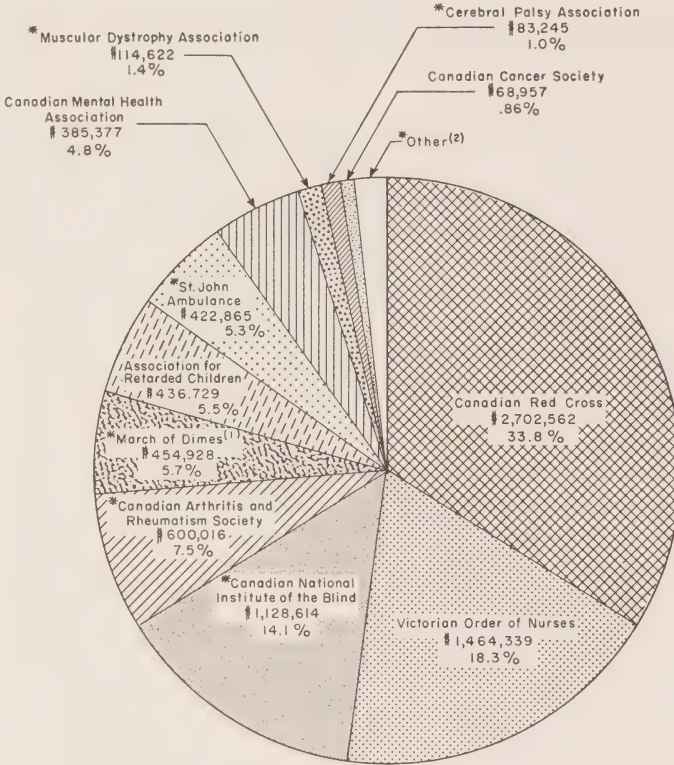
PROPORTION OF TOTAL CANADIAN COMMUNITY FUNDS  
GIVEN TO HEALTH AGENCIES: 1963



Source: Allocations to National Organizations by Canadian Community Funds,  
Community Funds and Councils Division, the Canadian Welfare Council, July 1963.

CHAR1 6-2

# ALLOCATIONS BY AGENCIES OF TOTAL GIVEN TO NATIONAL HEALTH ORGANIZATIONS - 1963



(1) Rehabilitation Foundation for Poliomyelitis and Orthopaedically Disabled

(2) Canadian Heart Foundation:.....\$46,985, .6%  
 Canadian Tuberculosis Association: \$2,115, .03%  
 Crippled Children and Adults:.....\$24,487, .3%  
 Multiple Sclerosis Society:.....\$57,815, .7%  
 Federation of the Blind:.....\$500, .006%  
 Total.....\$131,902, 1.7%

\*Allocations to National Organizations by Canadian Community Funds

Source: Community Funds and Councils Division,— The Canadian Welfare Council, July 1963.

sources specific to an individual organization. For example, the Canadian Diabetic Association obtains money earmarked for research from the sale of publications; the Mothercraft Society and the Victorian Order of Nurses receive money from patients for services performed; the Canadian Paraplegic Association derives an income from the sale of wheel-chairs, prosthetic devices and from services to patients; and the Red Cross Society derives an income from services rendered in clinics and hospitals, instructional programmes, homemaker services, veterans' services and the Junior Red Cross. In 1963 the 12 organizations in Table 6-7 derived 14.6 per cent of their total income from these "other" sources.

### *Distribution of Funds*

Voluntary health organizations have developed either to provide services or to finance research. Consequently the largest portion of each organization's funds is spent on patient services or on research, depending on the organization's orientation. This is borne out by Table 6-7. The Canadian Arthritis and Rheumatism Society, the Canadian National Institute for the Blind, the Canadian Paraplegic Association, the Red Cross Society, and the Victorian Order of Nurses all spend most of their income on patient services. The Canadian Cancer Society, the Canadian Heart Foundation, the Multiple Sclerosis Society, and the Muscular Dystrophy Association, on the other hand, all spend most heavily on research projects. For the 12 organizations listed, 59 per cent of the expenditure was allocated to patient services, and 15 per cent to research. However, 6 organizations spent nothing on research.

Voluntary organizations depend upon support from private citizens and corporations, and they have to keep the public aware of their role in the health field. Many organizations do this at the same time as they are trying to educate the public with respect to a specific disease and preventive health measures. If the agency spends its funds solely for advertising, that is, to gain financial or other support from the public, then it is not a public education cost. However, in most cases the organizations combine education and advertising costs in their financial reports and it is impossible to separate them. In Table 6-7 where they appear combined, they have been placed in the public education category and footnoted accordingly. Advertising costs alone were regarded as a fund-raising cost and included in the administrative cost category.

Two of the organizations included in Table 6-7, namely the Canadian National Institute for the Blind and the Canadian Paraplegic Association, are listed as having no expenditure on public education in 1963. The remaining 10 spent from 0.1 per cent (the Victorian Order of Nurses) to 39.6 per cent (Health League of Canada) of total expenditure in 1963. The average



proportion of total expenditure allocated to this area by the 12 organizations was 9.5 per cent.

The final expenditure common to all voluntary organizations is for administration. As the data available for the compilation of Table 6-7 were not homogeneous due to the disparate methods of financial reporting, the administrative category is necessarily a broad one. The general definition used was that any expenditure that was not directly related to patient services, research or public education, but did relate to the machinery for the provision of these services, was an administrative cost. In this fashion, the cost of fund-raising was included in the administrative category.

In Table 6-7, administrative expenditures formed, with one exception a quite regular proportion of total expenditure. The average expenditure for administration in 1963 by the 12 organizations was 13.1 per cent of total expenditure. The Canadian Mothercraft Society spent the highest proportion on administration. However, this is the consequence of a reporting system that did not separate the salaries of staff responsible for operating the society's hospital from those of the administrative staff. Considering the other 11 organizations, it may be seen that, generally, the larger the organization the smaller the proportion of total expenditure spent on administration. In other words, there seem to be economies of scale in the voluntary field. However, any comparison of administrative costs must bear in mind that the different organizations have different administrative structures and different reporting procedures.

These differences may also account for the residual expenditure category used in Table 6-7, which includes as "other" all those expenses that did not fit in the other four categories. The average expenditure in 1963 on this category was 2.8 per cent.

## ORGANIZATION

Although health and welfare in Canada are matters that are largely under provincial jurisdiction, there is also federal legislation that permits voluntary organizations to obtain national incorporation. In consequence, voluntary organizations may be incorporated nationally, provincially or both. In some cases, local chapters may be incorporated as well, so that any organization may have national, provincial and local chapters all with some degree of autonomy and with powers and responsibilities varying between organization levels.

In the development of voluntary organizations the movement has gone two ways, either from the national level to the provinces and regions or from the local or provincial society to the national level. Such movements have,

of course, called for considerable adaptation at all levels, not only in the structure of the organization, but in the functions to be carried out and the priorities to be established. For example, the Canadian Mental Health Association, originally founded as a national organization, had as its main purpose public education for an enlightened approach toward treatment of mental illness, as well as the promotion of mental health. However, some local chapters and provincial divisions developed out of older societies which had already built up programmes of voluntary visiting to mental hospitals, recreational programmes for the psychiatric patients and social action of a purely local (e.g., SHARE in Manitoba) or provincial (Nova Scotia) nature.

In contrast, the Canadian Association for Retarded Children underwent considerable evolution on a local and provincial level before 1955 when seven provincial associations joined to form the Canadian Association for Retarded Children. Another three years were to pass before the national organization received its Letters Patent. Staffing and financing a national office came even later, in 1959, as local priorities for the establishment of facilities for the trainable retarded consumed the time, energy and finances of the determined parents. As local and provincial governments began to assume increasing responsibility for the trainable, as well as the educable and custodial categories of the mentally retarded, the Association moved to achieve effective liaison with the federal and other governments on a national basis.

Other organizations with varying distribution of responsibility for the implementation of broad national policy are: the Canadian Foundation for Poliomyelitis, the Canadian Society for Crippled Children and Adults,<sup>1</sup> the Canadian Cystic Fibrosis Foundation, the Canadian Hemophilia Society, the Multiple Sclerosis Society of Canada and the Muscular Dystrophy Association. The national office assumes responsibility for the provision of educational materials and administers research programmes while the local associations negotiate methods of fund-raising and devise programmes of patient-aid. The Canadian Arthritis and Rheumatism Society provides an example of what appears to be a balance of powers with regard to decisions concerning programming and distribution of staff. Like most of the organizations discussed above there is a National Board of Directors advised by a National Medical Advisory Board. There is a structure at the provincial divisional level, with most divisions being administered by medical directors, full- or part-time. Conforming with the usual pattern, the research and professional education programme is administered nationally, and there is a central mailing list. Tabulation and analysis of treatment statistics are done at the national level.

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<sup>1</sup> These two organizations joined nationally in 1962 to form the new Rehabilitation Council for the Disabled. Each agency retained its own national charter. While most provincial and local societies have followed the example set by the national organization, some have not.

This is possible when there are professionals in the health field at the local level who provide the data.

Other distributions of functions exist, however. For example, provincial divisions have only been developed since 1953 in the Victorian Order of Nurses; the local chapters have the responsibility for raising sufficient funds to operate on a financially self-sufficient basis. The national office maintains statistics, determines policies and standards and is responsible for the hiring and allocation of staff. The national office also assists in establishing new branches and new services.

In the St. John Ambulance, the national headquarters provides general direction and supervision of instruction and voluntary services including the preparation of instructional material and maintenance of central purchasing and stores. The Canadian Cancer Society is affiliated with the National Cancer Institute but incorporated separately, with the latter being the research branch of the Society. The president of each is appointed as officer to the board of the other, and there is a joint executive director and treasurer. The Canadian Red Cross has a Central Council consisting of approximately 60 members which is the governing body of the Society. Twenty national standing committees co-ordinate the provincial and local efforts in their area of concern and provide continuity in policy.

### VOLUNTARY HEALTH ORGANIZATIONS IN SELECTED COUNTRIES WITH COMPREHENSIVE HEALTH SCHEMES

Some concern has been expressed to us that the advent of a comprehensive health care programme may seriously affect individual initiative and voluntary effort, which have played such a significant role in the development of health services in Canada. In fact, however, the broader the concept of health care and the more extensive the provision for it, the greater is the responsibility of every citizen and every group for the promotion of community health. This is evident from a summary of activities in countries with comprehensive health programmes, illustrating the way in which voluntary organizations are supplementing the statutory agencies in the development and elaboration of existing services, and are leading the way in the exploration of new ones. In fact, the analysis of the experiences of other countries with the comprehensive health schemes has confirmed our own conviction that there is an expanding and even more useful place for voluntary organizations in Canada. They can be of even greater service to the Canadian people within the framework of an all-inclusive health service programme.



In considering the voluntary organizations in other countries, it is noteworthy that there is a growing tendency for Canadian voluntary organizations to be associated with them in international bodies. In some instances, Canadians have taken an active lead in the development of international standards, for example, in rehabilitation, mental retardation and tuberculosis, in the management and control of disease, as well as in the implementation of those preventive measures which will contribute to the well-being of mankind. We review below developments in the following countries: United Kingdom, Denmark, Sweden, Norway, New Zealand, and Israel.

### *United Kingdom*

It might be thought that under the British National Health Service the role of the voluntary organization would have diminished. This however has not been the result. "Voluntary bodies have proved to have a role to play, working in co-operation with State agencies, not in competition with them, and voluntary workers are active not only in the service of voluntary bodies, but also of official ones and in the conduct of public affairs."<sup>1</sup> As the traditional areas of responsibility, particularly the financial support of existing services, have gradually been replaced by the expansion of public social services, the energies of voluntary groups have been directed to the development of new services. "In exploring new or better ways to help people in various kinds of distress, the voluntary bodies have a freedom to innovate and experiment which is not open to bodies limited by the terms of their statutory powers and accountable to the public as a whole for the way they spend their funds."<sup>2</sup> They bring to their work a devoted enthusiasm and an independence in approach which militate against the rigidity or remoteness which can occur in undilutedly expert and official systems.<sup>3</sup>

Among the areas where voluntary organizations have continued to operate is the provision of supporting services for those who are ill or handicapped and are not in hospital. The Women's Voluntary Service is the leading British voluntary organization in the area of provision of services to the handicapped. Through its 1,500 W.V.S. centres it lends a hand in the practical difficulties of the handicapped, visiting the sick, bringing "meals on wheels" to the home-bound, minding children, and carrying out relief work for the victims of fire and flood.

Another area of service where voluntary organizations continue to make a contribution is the provision of ambulance services. Local authorities

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<sup>1</sup> British Information Services; *Voluntary Service to the Community in Great Britain*, No. R5089, August 1961, p. 1.

<sup>2</sup> *Ibid.*, p. 3.

<sup>3</sup> *Ibid.*, p. 1.

who bear the responsibility for providing ambulance services in some cases have entered into agreements with the Order of St. John and the British Red Cross Society to provide all or part of the service. The Hospital Car Service is an area where the role of voluntary organizations in ambulance service may expand, organized by the British Red Cross, the St. John's Ambulance Brigade, and the Women's Voluntary Service, it relieves pressure on the National Health Service ambulance service by providing free transportation in private cars.

Voluntary organizations provide valuable services in helping the mentally disordered. The largest voluntary association aiding the mentally disordered is the National Association for Mental Health. Others include the National Society of Mentally Handicapped Children, the Mental Health Research Fund, and the Mental After Care Association. The League of Friends provides volunteer visitors to many mental hospitals. The National Association for Mental Health alone, or in partnership with local authorities and other organizations, operates hostels for the retarded or the mentally ill. The Association stimulates progress in mental health by sponsoring public and professional education and by carrying out pilot projects on new services.

Finally, voluntary organizations are represented on the Regional Hospital Boards. All members of these Boards serve without remuneration on honorary appointments.<sup>1</sup>

### *Denmark*

Despite extensive public participation in health care in Denmark, the voluntary organizations continue to have a significant role in the Danish health programme. As a recent report pointed out there are "a number of fields, e.g. of an experimental character, where private effort has its special merits".<sup>2</sup>

In many cases it was private initiative which originally provided a service for the handicapped. When public support became necessary, many of the voluntary agencies continued to provide services financed by public funds while special services for the handicapped were provided exclusively by voluntary organizations who received State grants.

In addition, there are institutions which attend to special categories of disabled persons: the Association for Spastic Children, the National Association for the Prevention of Multiple Sclerosis, the I.R.P. (assisting the group suffering from polio-induced respiratory paralysis), the Association

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<sup>1</sup> *Health Services in Great Britain*, Central Office of Information, Reference Pamphlet No. 20, London: Her Majesty's Stationery Office, 1960, p. 11.

<sup>2</sup> *Rehabilitation and Care of the Handicapped in Denmark*, International Relations Division, Ministries of Labor and Social Affairs, Copenhagen: 1963, p. 10.

for the Establishment and Running of Children's Institutions for Spastic and other Handicapped Children, the Danish National Association for Infantile Paralysis, the Sanatorium Association of the Co-operative Societies (for rheumatic diseases), and the National Association for the Prevention of Rheumatic Diseases all operate institutions for their special groups. The Cripples Fund, a voluntary fund-raising agency, carries out comprehensive projects for the benefit of the crippled.

Although epileptic patients receive treatment in general hospitals, the main responsibility for epileptics in Denmark lies with the State-approved private institution, the Filadelfia Colony. The operating expenses of this organization are paid mainly from public funds but the administration is under voluntary auspices. The National Association for Epilepsy is a patient-member organization of epileptics.

Basic medical, educational and vocational services for the blind and partially sighted are provided by the State, under a joint administrative sponsorship with voluntary organizations. This government service provides institutes, printing, a library for the blind, a clinic dedicated to fighting hereditary blindness, a registration system, and educational and employment opportunities for both young and old. Within this government framework the voluntary agencies have a small but significant role. The Danish Society for the Blind and other voluntary organizations and institutions run State-approved nursing homes and apartments; and a counselling service to give the blind help and guidance is run co-operatively by the State and the Danish Society for the Blind. Finally, there is one private industry that, in close co-operation with the government, employs blind personnel almost exclusively.

As with the blind, care of the deaf is largely carried out by the State. However, again the general programme is supervised by a joint board representing both government and voluntary bodies interested in the care of the deaf. With respect to the voluntary organizations, the Danish National Association for the Deaf represents the interests of the deaf. The hard of hearing are represented by the National Association for the Promotion of Better Hearing.

The care of those suffering from speech defects is provided free of charge and is concentrated in two regional State institutions. These institutions also treat some cases of word-blindness but the most severe cases are referred to voluntary-organized institutes for the word-blind, of which the largest is the Institute for the Word-blind near Copenhagen.

Responsibility for the mentally handicapped also rests with the State. Danish legislation recognized that it was better to keep handicapped children within the family if possible, and therefore it provided that day schools established by private initiative or local authorities could receive State subsidies. This legislation applies to both the physically and mentally defective.



Hospitals for the mentally ill are mainly State-operated but there is also an auxiliary programme where institutional care is supplemented by supervised family care.<sup>1</sup>

### *Sweden*

As in the other northern European countries, in Sweden the first steps in most areas of health care were the result of private initiative. The fight against cancer, tuberculosis, mental illness and other diseases was begun by the efforts of voluntary organizations. However, to a very large extent, these functions have been undertaken by the State and the voluntary groups are mainly concerned with the public information aspects of the campaign against the diseases, especially tuberculosis and cancer. Services for crippled children are operated by volunteer agencies and generously supported by the public.<sup>2</sup>

### *Norway*

With very few exceptions, health insurance now covers every resident in Norway. Three Norwegian voluntary health organizations work primarily with problems arising from cancer. The largest of these is the National Cancer Society and it finances a great deal of research and helps with the social problems of cancer patients. These voluntary organizations, and the other Norwegian organizations, like their counterparts in other Scandinavian countries, play a role which supports that of the government service.

In Norway a large proportion of mental patients are attended in private homes. With respect to maladjusted children, a children's psychiatric institute has been opened in Oslo under private initiative. This institute not only provides care, but also performs a training function. Enlargement and improvement of treatment for the mentally retarded is being carried out through the close co-operation of the State and wide private initiative.<sup>3</sup>

### *New Zealand*

Although New Zealand has a comprehensive health services programme, there is a notable list of voluntary agencies performing many essential services. As a recent report points out, "... a feature of the health services in New Zealand is the manner in which official and voluntary efforts are integrated". In many cases the voluntary agencies are "encouraged and

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<sup>1</sup> Halck, N., *Social Welfare in Denmark*, Ministries of Labor and Social Affairs, Copenhagen: 1961, p. 51.

<sup>2</sup> Nelson, G. R., *Freedom and Welfare*, Social Patterns in the Northern Countries of Europe, Ministries of Social Affairs of Denmark, Finland, Iceland, Norway, Sweden, 1953, p. 374.

<sup>3</sup> Evang, Karl, *Health Services in Norway*, E. K. B. Boktrykeri. Oslo: 1960.

assisted" in their work by grants from public funds.<sup>1</sup> The most significant of the voluntary organizations are: the Plunket Society, the King George the Fifth Memorial Children's Health Camps Federation, St. John Ambulance (N.Z.), the New Zealand Red Cross Society, the Crippled Children's Society and the New Zealand Federation of Tuberculosis Associations.

The Plunket Society operates six Karitane hospitals for babies needing special care and for the training of "Plunket nurses". These nurses instruct mothers, visit the homes of nearly all newborn babies, and staff clinics where children are examined regularly. In rural areas where there is no Plunket clinic, public health nurses do infant welfare work. The Plunket Society and the Government co-operate to ensure that each child receives five medical examinations before his twelfth year, and all the necessary inoculations and vaccinations. The Society, which provides its services free, receives subsidies from the Government and also receives strong financial support from all sections of the public. In this respect the Society is quite similar to our own Victorian Order of Nurses.

The King George the Fifth Memorial Children's Health Camps Federation maintains a chain of permanent health camps for delicate and undernourished children. Like the other voluntary organizations, the Federation works in close co-operation with the Department of Health to ensure that the available resources are utilized to the best advantage, and it retains its voluntary character. The financing for the Federation's activities is derived from two sources: public donations and from a government subsidy derived from postal surcharges on specially designed health stamps.

The St. John Ambulance (N.Z.) has divisions throughout the country carrying out free ambulance work and instruction in first aid and home nursing. This organization, like ours, provides first aid to participants and spectators at sports events. The New Zealand Red Cross Society gives training in first aid, home nursing, hygiene and sanitation, and emergency transportation of the injured. Graduates of the Red Cross classes form voluntary first-aid detachments.

The Crippled Children's Society keeps a register of all crippled children, helps them acquire all possible medical treatment, and undertakes vocational training and home education where these are required. The interests of patients suffering from tuberculosis are protected by the New Zealand Federation of Tuberculosis Associations. As well as assisting the Department of Health with the health education of the public with respect to tuberculosis, it also concerns itself with the after-care and vocational training and guidance of patients.

Provision of care for the aged has involved the joint efforts of the government, hospital boards, municipal bodies and religious and social

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<sup>1</sup> *New Zealand Official Yearbook*, Department of Statistics, Wellington: 1963, p. 154.

welfare organizations. A programme for providing meals to old people is in operation. The voluntary organizations which build homes for the accommodation and care of old people receive a building subsidy of 100 per cent of the approved capital cost. These voluntary groups also finance the maintenance and management of the homes and control their operation. Other voluntary organizations manage or support homes for crippled children and for the mentally retarded.<sup>1</sup>

In summary, it can be seen that the introduction of a comprehensive health care programme has not meant the end of voluntary agencies in New Zealand. There remains a very important place and a need for the special services they can offer, both within and to supplement the health care services provided through government.

### *Israel*

Israel has the highest estimated physician-population ratio, 1:400, and a health programme with comprehensive coverage of approximately 80 per cent of the population. Nevertheless it encourages the development of new voluntary health organizations, integrated into the scheme of health and welfare services. They are to support and supplement the medical services beyond the basic care of the educational, recreational, social, camping, and personal needs of patients and families as well as public health education, and the drive for enlightened legislation.<sup>2</sup>

## CONCLUSION

The foregoing review of the financial and administrative structure of voluntary health organizations demonstrates a kaleidoscopic variety in origin, objectives, and methods of achieving these objectives. They are distinct in this respect from the more static and well established pattern of government services, but it is the variety and adaptability of voluntary organizations which makes them uniquely suited to seek out unmet needs and to pioneer new methods.

It is obvious from the experience of other countries that the introduction of publicly supported health services programmes in no way diminishes, although it may alter, the role of voluntary effort. In fact, it appears that the voluntary agencies have taken on more important new directions as the

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<sup>1</sup> *Health Services in New Zealand*, New Zealand Embassy, Washington, D.C., 1961.

<sup>2</sup> Paltiel, Freda L., "The Israel Rheumatic Fever Society, a study of a Voluntary Health Organization"; *Public Health*, Vol. 5, No. 4, Israel Ministry of Health, Jerusalem, November 1962, pp. 480-490 (English Translation, Reprint).



government has provided funds to relieve them of established services whose costs restricted their pioneering and expansion into new areas.

Their experience parallels to a degree what happened to hospital auxiliary societies in Canada following the introduction of hospital insurance. Being relieved of the essentially negative role of raising funds for hospital deficits, the auxiliaries have, on an expanding scale, directed their efforts to positive objectives.

There is, in our opinion, an important place for voluntary effort in the comprehensive health care programmes such as we recommend and we have strongly emphasized this point in Volume I.<sup>1</sup> We believe that, as demonstrated in other countries, voluntary organizations, in co-operation with the health professions, universities, and governments, will be able to accomplish even more in the future than they have done in the past. There is more work for both voluntary agencies and governments to accomplish than likely can be accomplished in the foreseeable future.

Yet there are powerful forces at work in society today, particularly specialization and technical change. These are profoundly influencing all organizations in Canadian society and voluntary services are equally affected by these developments. Specialization and the development of new services and methods of providing services will continue as voluntary agencies acquire new responsibilities, but the more this happens, the greater will be the need for co-ordination of these activities.

Changing health problems will require continuous evaluation of the services provided by voluntary organizations. These organizations have increasingly recognized the need for co-ordination of services and we have observed instances where closer co-ordination and even far-reaching financial and administrative integration of several organizations has brought about a more effective approach to their respective objectives. As an integral partner in the health services complex, voluntary organizations also will have to demonstrate their willingness to participate in the wider planning and evaluation of all health services which have become so necessary for the effective functioning of the health services complex.

The organizational structure which we have outlined in Chapters 7 and 8 should facilitate this development. The integration of representatives of voluntary health organizations including those concerned with the prevention of disease or accidents into the institutions responsible for the planning of health services, i.e., the Health Planning Councils, will strengthen their role and lead to their recognition in those areas where the need for their services has been determined. This applies particularly to their relationship with government agencies with whom a true partnership will evolve. Representation on Health Planning Councils will also enable them to observe their activities

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<sup>1</sup> See Volume I, Chapter 1, p. 12.

within the framework of all community services and to determine unmet needs on the one hand and redundant activities on the other. It will make for the effective pooling of effort among the various voluntary organizations as well as between voluntary and government agencies.

*The Commission recommends:*

- 224. That voluntary agencies have an integral place in any comprehensive health care programme and that they participate actively in the work of the various planning councils.**

The basic principles of financing voluntary health activities will be altered to the extent that the personal health services they provide will be paid for under the Health Services Programmes. In this respect the financial needs of voluntary organizations will be determined by the services they are required to provide, just as the needs for supplementary services, research and educational activities will become apparent from the operation of the Health Services Programmes, the work of the Health Sciences Research Council, and the review of health needs by the Health Planning Councils. This should go a long way in indicating the extent of financial needs and the required share of the income from united appeals to be allotted for certain activities. The fact that the Health Services Programmes will relieve voluntary organizations of the costs of personal health services will enable them to devote some of their resources to other purposes or to lower their budgetary requirements.

This summarizes our conception of the future of voluntary effort in the field of health services. It would not serve a practical purpose to list specific services which voluntary organizations should or should not provide in the future: the needs change, new types of services develop and old ones become obsolete. Like all other services, those provided by voluntary organizations will change as current needs and current awareness and knowledge of needs change. This is how voluntary services came into being in the past and this is how necessary changes will take place in the future.

One point relating to the present system of financing the activities of voluntary health organizations, however, must be stressed. As more voluntary organizations have been established to meet new needs, the public which is expected to contribute to these various causes has been faced by a bewildering and growing multiplicity of appeals without possessing the information needed to see the seemingly competing demands for support in their proper perspective.<sup>1</sup> There is a danger that this situation will result in apathy towards legitimate appeals unless assurance is given that voluntary work and donations will be used in the most effective fashion. We are con-

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<sup>1</sup> Private donations for health research are discussed in Chapter 4, pp. 128-130.

fident that this danger can be overcome by the voluntary organizations adopting a more effective reporting system which is now being used by some national voluntary organizations.

We have already mentioned the annual reports submitted to the Department of National Health and Welfare by voluntary organizations receiving grants.<sup>1</sup> This is a satisfactory way of keeping the public informed and *all* national voluntary organizations should prepare annually such a report on their activities. In this way the public will become aware of the assets and liabilities, incomes and expenditures, as well as the volume and type of services rendered by the various organizations.

*The Commission recommends:*

- 225. That all voluntary health organizations submit an Annual Financial Report to the Department of National Health and Welfare, describing their functions as well as showing assets and liabilities, income by source and expenditures under appropriate headings, duly audited in accordance with accepted auditing practices.**
- 226. That the Department of National Revenue take cognizance of the organizations so reporting, when recognizing donations as charitable exemptions under the Income Tax Act.**

We are convinced that, as in other countries, voluntary health organizations in Canada will continue to adapt their contributions to the needs of the day and of tomorrow in a constructive and flexible manner so that they can effectively supplement, as fully accepted partners, the private and public endeavours to provide Canadians with the best possible health care that today's knowledge and future scientific progress will be able to provide.

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<sup>1</sup> See p. 177.





## Organization of Health Services

We have emphasized repeatedly both in the first volume of our Report and throughout this second volume that the principal sources of improved health—other than the responsible behaviour of Canadians—are the number and skills of physicians, dentists, nurses, pharmacists, scientists, technicians and other people who participate in the provision of health services. The quality of health care therefore depends on the education and the training of the large and growing number of those who provide health services. We have also stressed that the quality of health care depends on talents and attitudes not so easily described, on the dedication of health personnel. The relief of pain and suffering, the development of confidence in those in distress, the comforting of the afflicted, the preparation of a person for death, the consolation of those bereaved or who must face the burden of sorrow associated with a severely retarded or crippled child and ultimately, in some cases, the necessity to bear the responsibility for life or death are tasks that must be borne by many in the health professions and the manner in which they are carried out is of major importance for the quality of health care.

Our recommendations relating to the manner in which health services should be organized within the Health Services Programmes recognize the paramount position of the personnel providing health services and will ensure that the quality of health services is maintained and improved. The changes that we envisage are in accord with the Health Charter for they are based on the maintenance of a close relationship between those who provide and those who receive health services including freedom of choice on the part of the patient and of the physician. They also recognize the necessity for the maintenance of free self-governing professions and institutions and the participation of such professions and institutions in the planning and implementation of the future development of the Health Services Programmes. *They do not involve any control over the physician or*

*dentist in the practice of his calling.*<sup>1</sup> All these hallmarks of high quality care would be maintained and improved in the future just as they have been maintained and improved in the past.

It is necessary, however, to recognize that individual health professionals and health institutions by themselves cannot provide all the conditions needed to ensure that Canadians obtain the best possible health care. In a country with an expanding population, where people are highly mobile and are becoming increasingly urbanized, some form of organization must ensure that the supply of health personnel and health capital expands to meet the needs of the growing population and that personnel and facilities are available in those areas where they are required. Similarly, in an age of rapid scientific and technological change, some organization must ensure that research and technical development is fostered in the field of health and that scientific and technical advances are embodied in better qualified personnel and the most up-to-date equipment. Finally, in view of the need to improve the quality of health care that Canadians receive and to ensure that scarce health resources are used most effectively, some organization must take the responsibility for evaluating the quality of health services and, what is essentially another dimension of quality, the manner in which scarce resources are utilized.

We are aware that many organizations, professional, voluntary and government, have performed valuable work in all these areas. At the same time, through the submissions made to us, through our hearings, and through the work of our research staff, we were made aware of the need for further improvements in the organization of health services and resources if the potentialities of the future are to be realized in the form of good health care. It was these considerations that led us to state in Volume I that an essential element in the provision of the best possible health care for Canadians was the improved organization of health services and to specify the organizational structure that we believed could best meet the needs of all Canadians.

Our purpose here is to examine in more detail the organizational structure that we recommended, to indicate the basis for these recommendations and finally to indicate the improvements that would arise from such changes. We have not recommended changes in organization just for the sake of change. We have recognized that all organizations in the health field, whether private, voluntary, governmental, or some combination of these, are no more than intermediaries, devices for bringing together individuals who need health services with those who can provide them. Nevertheless, if the needs of consumers and providers of health services are to be well

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<sup>1</sup> See p. 211.



served, organizations must continue to adjust, as they have done in the past, to the dynamic forces that make, and will continue to make for change in this country. Our recommendations in this area do no more than facilitate this process. They are designed to further the co-operation of private practitioners, voluntary organizations and public bodies in making the fruits of the health sciences available to all Canadians without hindrance of any kind and, in so doing, enable them to make the most effective use of all the nation's health resources.

## RECENT TRENDS IN BUSINESS AND GOVERNMENT ORGANIZATION

In almost every area of the economy the most striking characteristic of modern organizations, whether they be private or public, is an awareness of the need to change: to adjust to technological development, changes in demand, shifts in population. Moreover, this awareness of the need for change has been accompanied by an increasing concern with planning—with the preparation of projections of demand, with the setting of targets, with the assessment of alternative ways of achieving goals, with the evaluation of past performance for the determination of future actions, with the development of broader views of the consequences of individual decisions for the economy or society as a whole.

To some extent this has been the consequence of the growth in the size of organizations. In many areas of the economy the scarcity of skilled manpower and the productivity gains to be derived from specialization of functions and the consolidation of marketing processes have profoundly influenced organizational structure in the direction of larger scale, reduction in the number of small units and the concentration of production and distribution units in larger centres of population. Such developments are as evident in retail merchandising as they are in automobile manufacturing; in transportation services as they are in food processing. Nor have services produced in the public sector of the economy been immune to such changes. Government agencies and educational systems to name but two have been subject to the same process. The average educational unit for example has grown in size and provided more specialist services for a larger area as the growth of knowledge and the relative scarcity of specialists led to the integration of small local educational units into larger regional units. Units of local government have been expanded as the advantages accruing to larger regions led to amalgamation.

As the size and complexity of private and government institutions have grown there has been an increased awareness of the need to ensure

that the large complex organization actually achieves its goals; that it does meet the needs of the community and uses scarce resources efficiently. The gains associated with large-scale enterprise may be offset by the losses associated with centralization; with a failure to meet the wishes of those who buy the product or with an inability to produce new products, to generate successfully innovation and production. Alternatively scarce resources may be wasted at the periphery through failure to co-ordinate decision-making at the centre. In the case of government, over-centralization may result in a failure to provide adequately and efficiently the services that the public desires.

In a competitive economy, a firm that failed to produce the goods and services that people want, or produced them at a higher cost than a competitor, would ultimately find its profits seriously reduced and perhaps be forced out of business. In these circumstances, the development of high speed data-processing units along with advances in information theory have enabled management of a modern corporation to become increasingly concerned with the assessment of objectives, the means available to reach these objectives and possible conflict of objectives. They have enabled decision-makers to include many more variables in their projection of the future path of the organization thus giving them greater accuracy in fundamental decision-making. They have also permitted more decentralized operations since the activities of such units can be quickly reviewed and changed if necessary. In such circumstances unnecessary fragmentation of responsibility is avoided as well as the wasteful use of scarce talents. The over-all objective of the organization is achieved while effectively decentralizing decision-making to permit the greatest possible freedom for individual activity. In short, interdependence and flexibility are promoted rather than bureaucracy.

Organizations, such as governments, which provide services not subject to the test of the market, are also becoming increasingly aware of the need for a continuous appraisal of their ability to meet the needs of the public and of the means used to achieve their goals. The Report of the Royal Commission on Government Organization has documented the need for these appraisals. Commenting on the problem of duplication and overlapping responsibility in the area of defence, the Commissioners stated that "... there is a growing range of activities of common concern to the Services, for which the traditional basis of organization is unsuited. It is increasingly recognized that to maintain three separate organizations for such functions is uneconomic. Moreover, the chronic scarcity of many of the skills involved cannot be ignored".<sup>1</sup> Again the need for decentralized operations within a

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<sup>1</sup> The Royal Commission on Government Organization, *Special Areas of Administration*, Vol. 4, Ottawa: Queen's Printer, 1963, p. 68.

framework of centralized policy formation was emphasized by the Commission as follows: "An exaggerated concern with ministerial authority . . . will produce administrative apoplexy at the centre of government and paralysis at the working extremities, and cause frustrating delay and inconvenience to the public".<sup>1</sup> Here, as in the case of business, the use of data-processing equipment and the development of techniques for evaluating the costs and benefits of alternative courses of action, to some extent now make it possible to subject government programmes to rational analysis and the Commission stressed the need for the application of such tools in many areas of government activity.

Along with this emphasis on the evaluation of internal decision-making there has also developed an increased awareness that individual decisions may have unforeseen consequences for the community as a whole. That is, it has become clear that decisions in one area may have, because of a lack of complete information, unforeseen consequences for another area. The concentration of industrial production in metropolitan regions and the economic and social decline of regions where industries have shut down may have consequences for both regions that private decision-makers have not taken into account. We could go on to enumerate these conflicts but the organizational needs are clear. Increasingly it has become accepted that some public or semi-public body must take the responsibility for providing an over-all view, for pointing out where policy and administrative conflicts may lie.

It is from such developments that the current concern with "planning", with the recognition that a broader view of the consequences and the results of decision-making must be taken, has arisen. As a consequence, organizations such as the National Economic Development Council in Britain and the Economic Council of Canada have been developed, containing representatives of groups such as management and labour, and having access to technical staff. These bodies endeavour to establish rates of economic growth, to evaluate alternative paths to achieve growth, and, through the weight of their authority, seek to convince government, business and labour to take a longer term view of economic growth and to adopt policies that do not conflict with but lead to a high rate of achievement. This type of planning has come to be called "indicative planning" since it indicates the path that should be followed but does not give the planning authority the power to take steps to change a situation. As a result of important successes, such planning has become an essential part of the operations of most Western economies.

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<sup>1</sup> *Ibid.*, Vol. 5, p. 76.



## RECENT TRENDS IN THE ORGANIZATION OF HEALTH SERVICES

It is evident that the business and government organizations that exist in Canada today are profoundly different from those of a generation ago. They are learning to live in a world of rapid change, where some degree of co-ordination and planning is necessary, where mathematical theories of decision-making and data-processing equipment are used to achieve both the goals of the organization itself as well as those of society as a whole. How far have organizations concerned with health care and health services also adjusted to this dynamic world? How successfully have they mastered the problems of effective organization and planning for the future?

When attempting to answer these questions it is necessary to keep in mind that health services are a relatively unique product in that the ordinary market forces do not operate to the same extent as they do in the production and distribution of most other goods and services. Health services are not generally produced by business corporations raising their own funds in the market, employing health personnel on salaries and wages, carrying on research and in-service training and financing all these activities by selling health services in a competitive market. Rather they are produced by a variety of independent persons and suppliers, some of whom are independent professional men, others government or voluntary organizations. For example, a crucial component in the provision of health care is the hospital in which independent practitioners have access to skilled ancillary personnel and capital at no direct cost to themselves. Hospitals, however, are generally organized on a non-profit basis by voluntary organizations or government bodies, they finance their capital accumulation through philanthropy or government grants and obtain their operating revenue principally through payments made under the Hospital Insurance and Diagnostic Services Act. Again it is not profit-oriented enterprise but governments and voluntary organizations generally that are responsible for the provision of community health services, the operation of home nursing programmes, rehabilitation programmes, the financing of health research and the provision of educational facilities. Such activities are almost entirely financed through taxation or philanthropy.

The special characteristics of health services have led to an institutional structure in which production and the use of resources generally are much less influenced by competition and the search for profits than in the economy generally. It is also the case that the influence of the consumer is much less in this area. Unlike many other goods and services the consumer as a rule is incapable of fully evaluating the health services he receives or even if he needs them. It is true that the decision to acquire health services usually

is made by the individual or family head who decides to go to a physician or dentist. But hospital services, medical services, prescribed drugs and dental services can only be obtained through the decision of a physician or dentist and it is the practitioner generally who determines the amount, type and location of services received. In this area the recipient lacks the competence to judge what is appropriate.

Consumers, of course, are not reliable judges of many of the commodities they buy. Laws have been passed to control the quality of many foods or to provide information to enable them to purchase goods with some degree of competence. Yet health services, along with other professional services such as legal or educational services, are relatively unique in that there seems to be no way to provide the buyer with sufficient information to judge the quality of service he purchases. Moreover, while the consumption of legal or educational services is unlikely to do harm to the individual, this is not the case for many health services. Thus, "unnecessary" surgery, excessive radiological services or too many prescription drugs can have serious consequences for the user. It follows then that for the majority of health services, the amount, the type and the location of health services must be decided by the practitioner on the grounds of medical or health needs. The judgment of the profession determines quality of care; the consumer generally does little more than accept the decision of the practitioner.

But many individuals do not possess the knowledge or are unaware that they are in need of health services at all. Clearly, since many individuals, particularly children, would suffer permanently from failure to obtain health care, it has been necessary to create demand, to make individuals aware of the need to use health services either by advertising, or education, or mass screening programmes (such as those for tuberculosis) carried out by professional, voluntary or government organizations.

Finally, the diversity of services required for the treatment of certain health conditions peculiar to the chronically ill or the disabled whether they are young or old make it difficult for individuals either to identify or to obtain access to the full range of services they need. It is one thing to go to a store to purchase the various ingredients required to produce dinner, it is another to acquire the services of a physician, a public health nurse, a physical therapist, a social worker, a homemaker, a vocational teacher or an ambulance all of which may be necessary for the satisfactory treatment of a disabled or sick person.

Within these special circumstances there can be no doubt that health organizations have shown considerable adaptability in adjusting to a rapidly changing world—this despite the limitations of competition among suppliers of health services. They have taken advantage of the productivity gains associated with the use of specialist personnel and increased amounts

of capital equipment and these have produced significant changes in the location and size of organizational units. For example, the provision of medical services based on the individual practitioner working in the patient's home without benefit of specialist ancillary personnel and equipment has virtually disappeared. Instead, medical services increasingly have been provided in the practitioner's office, or in hospital where a variety of ancillary personnel and equipment are available, payment for which in many cases is obtained through the use of some prepayment mechanism. The average size of the organizational unit in consequence has also tended to grow as physicians work in partnership or group practice and hospital care is concentrated in larger general hospitals. The benefits of these developments in the form of increased efficiency of physicians and dentists and the more effective treatment of illness and disease have been outlined in Volume I.<sup>1</sup>

Of particular importance has been the success of the combined efforts of governments, voluntary organizations and the general public in the provision of hospital accommodation. Despite some acute local shortages, the supply of hospital beds has expanded to meet the demands of the Canadian public. Similarly the co-operative efforts of voluntary agencies, professionals and governments have done much to provide organized services for patients confined to their homes, for the rehabilitation of the chronically ill and disabled, for the education of the Canadian public in the subject of good health, for the financing of health research and the provision of educational facilities and bursaries for the education of health personnel.<sup>2</sup>

Both health professions and health institutions along with governments have recognized that individuals and families generally do not determine the quantity of health services they receive—other than first visits—and that they are unable to evaluate the services they do receive in a significant way. As a consequence, both government and the professions have developed techniques to perform for the individual what he cannot perform himself. By law the practice of medicine, dentistry, nursing, pharmacy and other health occupations is restricted to those who are professionally qualified, hospitals must be approved and in general, Canadian governments acting on behalf of their citizens ensure that institutions and personnel are qualified to perform their duties. Professional bodies require a high standard of achievement before granting a licence to practise a profession or permitting a professionally trained person to classify himself as a specialist in some health field.

The problems involved in the maintenance of a high quality of health care in a world of rapid scientific and technical change have been faced by hospitals and the medical profession through the accreditation

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<sup>1</sup> See Volume I, Chapters 7 and 13.

<sup>2</sup> See Chapters 6 and 8.



programme of the Canadian Council of Hospital Accreditation.<sup>1</sup> Of special importance are such hospital committees as the Admission and Discharge Committees whereby admissions to hospital and length of stay can be evaluated from the view-point of good medical practice, the Tissue Committees which examine the volume and type of surgery carried out by individual surgeons and the Medical Audit Committee which reviews diagnoses and records and provides a standard method of evaluating the quality of medical care provided by physicians including both the kind and quantity of services.

Physician-sponsored prepayment plans have also begun to develop techniques to evaluate the quality of medical care received by patients. To quote the brief of the Trans-Canada Medical Plans, the "... plans, through their subscribers' claim records, through their claims settlement arrangements, through the application of measuring techniques and through the exposure of claims to the medical referee of reference committees, have substantially contributed to the profession's efforts to maintain high quality medical care ... For unusual claims and those of a problem nature medical reference committees or other similar types of arrangements are available, through the facilities of the provincial medical division, for assistance in adjudication."<sup>2</sup>

Again in the brief submitted to us by the Manitoba Medical Service it is reported that "a statistical profile by physicians' code number is prepared under the guidance of a consultant. This serves to separate those who might at first glance appear to have an unusual pattern of service to subscribers ... Interpretation requires that anonymity be withdrawn, when necessary, for the Medical Review Committee analysis of an unusual pattern. The microfilm record of that doctor is then compared with that of his peers in the same field of practice."<sup>3</sup>

The medical profession through refresher courses in medical schools, lectures and classes at meetings of local provincial and national medical societies has also contributed to the improvement of the quality of health services and, in a similar fashion, have the dental, nursing and other health professions. Government agencies too, specifically provincial hospital divisions, are also concerned with maintaining and improving the quality of hospital care.

Yet it is clear from the evidence submitted to us, augmented by our analyses and studies, that the organization of health services still leaves much to be desired. In Chapter 8 we will examine in more detail the short-

<sup>1</sup> See Volume I, Chapter 13, pp. 548-551.

<sup>2</sup> *Trans-Canada Medical Plans (1960)*, brief submitted to the Royal Commission on Health Services, Toronto, May 8, 1962, p. 28. See also *Windsor Medical Services, Inc.*, *ibid.*, p. 13.

<sup>3</sup> *Manitoba Medical Service*, brief submitted to the Royal Commission on Health Services, Winnipeg, January 16, 1962, pp. 14 and 15.

comings that have been evident in the organization of health services at the local level. Despite the contributions of professional personnel, voluntary organizations and government agencies, except in a relatively few instances, organizations have not been developed to provide home care programmes or rehabilitation programmes for the vast body of Canadians. Here, the multiple organization approach, although in some instances it has led to striking new solutions to these problems, has not, in its present form, provided all Canadians with the most effective health services.

In the area of hospital construction, although the need for a planned organization and development of hospital services has been widely recognized as desirable, and although concrete steps have been taken to implement such planning in some instances, there is still much to be done if hospital resources are to be used efficiently while, at the same time, meeting the legitimate needs of patients.

The need for such planning has been aptly stated by the Canadian Hospital Association in its brief submitted to the Commission. "The purpose of a (provincial) master plan is to serve as a blueprint for developing the essential hospital facilities in the proper locations so that there will be available within reasonable distance of all provincial residents adequate hospital services of high quality, without unnecessary duplication or waste of resources."<sup>1</sup> Three basic premises, according to the Association, should underlie the plan:

- (1) Since serious illness requiring advanced surgical and medical care occurs in both rural and urban areas, it is desirable to improve the services available outside the main urban centres by providing more adequate facilities for advanced medicine at key hospitals strategically located throughout the province.
- (2) Since complex hospital services of high quality, involving expensive equipment and highly skilled personnel, either cannot be provided, or cannot be provided at reasonable cost, in small hospitals and nursing homes, emphasis must be placed on the establishment of larger district hospitals rather than on a large number of small, inadequate and uneconomic units.
- (3) To enable medium- and small-sized hospitals to provide more adequate services, it is desirable that larger hospitals should assist the smaller hospitals by providing such services (diagnosis, treatment, teaching and administration) as cannot be provided by them individually.

This movement towards a regional hospital service has been supported by all groups that have examined the problem.

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<sup>1</sup> *Canadian Hospital Association*, brief submitted to the Royal Commission on Health Services, Toronto, May 1962, p. 75.

Regional planning of hospitals was introduced by the Saskatchewan Health Services Planning Commission as early as 1951 and updated in 1961 with the development of a Master Plan calling for the establishment of a reorganized regional hospital system with a smaller number of regions; the establishment of regional hospitals, district hospitals and limited function small community hospitals; and the co-ordination of the general hospital programme with related community health programmes. The Committee for Survey of Hospital Needs in Metropolitan Toronto has recommended the establishment of a Master Plan for the development of hospital facilities in Metropolitan Toronto along similar lines. The Manitoba Hospital Survey Board also has developed a plan relating both to the distribution of hospitals and the adequacy of the supply and distribution of hospital personnel.<sup>1</sup>

Despite these developments, the truly regional planning of hospital-services has still a long way to go before it becomes effective. As we noted in Volume I, the decision to build hospitals has often been affected by considerations other than actual health needs: philanthropy, local pride or even political pressures. Hospitals also have been built because of lack of alternative health facilities or because of the limited nature of coverage under existing health services prepayment plans. The existing organizations concerned with hospitals have not, as yet, succeeded in solving the problem of the wasteful use of hospital resources.

The quality of health care, although in many places as high as any in the world, over the whole range of health services and over the whole country does not, as yet, match the standards which are capable of being reached. Not all hospitals are accredited. Not all hospitals maintain the procedures and the records needed for evaluating the quality of professional work. Many physicians practise in small hospitals where it is difficult to establish a medical staff organization and thus provide adequate professional supervision of quality. In the case of personnel working outside the hospital such evidence as we have suggests that there can be serious deficiencies in the quality of practice.<sup>2</sup>

Finally, in the increasingly important area of planning the future supply of health services, and despite past improvements, the present deficiencies are striking. The inadequacy of present planning is evident from the need to embark on a crash programme to meet the manpower needs of the next decade. Again the inability of the existing organizational structure to provide the specific skills needed in a rapidly changing world is evident from

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<sup>1</sup> A similar approach has been developed in England where the benefits of a regional hospital system, combined with a programme for integrating hospitals more closely with organizations providing care and treatment out of hospital, have led to the development of a regional hospital plan to be implemented fully by 1975.

<sup>2</sup> See Volume I, Chapters 2 and 13, pp. 52 and 544-550, for a discussion of these points as they relate to medical practitioners and hospitals.



the shortages of university trained nurses, qualified dental auxiliaries and paramedical personnel. Nor despite the period of time that has elapsed since the introduction of the Hospital Insurance and Diagnostic Services Act, have satisfactory techniques been established relating developments in this area to other areas of health services. The failure to develop the facilities and manpower needed for medical and other health research in Canada is evident from the shortcomings of the present system.<sup>1</sup>

There can be no doubt that the public, the health professions, voluntary health organizations and governments through their individual and co-operative efforts have worked to improve the quality of health services Canadians receive. They have responded to the dynamic forces of change, but there is still room for vast improvement. There are still gaps between what is and what might be. Moreover, the greatest gaps are in the most crucial area—that of formulating long-term objectives at the local, provincial and federal level; the establishment of some systematic method of assessing how far these objectives are achieved; the development of a mechanism for allowing those who use health services and those who provide them to participate fully in the formulation of objectives and the assessment of their achievement. The future organization of health services that we recommend is designed to eliminate these gaps.

## FUTURE ORGANIZATION OF HEALTH SERVICES

The organizations that operate in the area of health services in the future will be concerned with far more than establishing objectives and evaluating how satisfactorily these are achieved. Some health organizations will be responsible for paying for health services, others will be responsible for arranging for their provision. Some organizations may carry out all three functions.

In order to examine this complex topic we have thought it desirable to discuss it in two parts. The first part is devoted to an examination of those organizations concerned with arranging for the provision of health services. The second part examines the organizations which will be responsible for paying for health services, establishing objectives and evaluating the success of the various components of the Health Services Programmes.

### *Provision of Health Services*

The organizational structure that we envisage does not involve any essential change in the responsibility for the provision of health services.

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<sup>1</sup> See Chapter 4.

Individual professional personnel, in the practice of their profession, will continue to exercise their professional functions in a free and independent manner. They will continue to determine the health services that their patients will receive and they remain as "independent contractors" and as members of professional groups with the responsibility for maintaining the quality of health care. *No profession is nationalized; no professional person is turned into a state employee; no practitioner is coerced into working in a specific region or occupation or prevented from practising his profession in accordance with his training, experience, and professional ethics. Indeed what we have recommended in the area of medical care is a continuation and an expansion of the medical care prepayment plans operating on a "service contract" basis that have been developed so successfully by Canadian physicians and those associated with them.*

Voluntary organizations too will continue to perform their role of providing health services or the maintenance of some form of organization that makes available to Canadians the services of professional and ancillary health personnel and equipment. The ownership and operation of public hospitals, which to a substantial extent lie with voluntary groups or religious orders, unless a community wishes to do otherwise, would remain untouched in the programmes we recommend.<sup>1</sup> Nationalization of hospitals in the individual provinces is unnecessary to attain the objectives of high quality and effective hospital care providing steps are taken to develop consultative and planning organizations. Again, as we point out in Chapters 6 and 8, we anticipate that voluntary health organizations will continue to participate in the operation of home care programmes, rehabilitation services, community nursing programmes, the education of health personnel, the health education of the general public and the financing of health research.

Although private practitioners or voluntary organizations will continue to provide the bulk of health services, public authorities will continue to provide most public health services. The scope of government services depends, however, on the historical development within a province with respect to the choice of organization and obviously differs from province to province.

It is evident that Departments of Health will have, as they now have, the responsibility for providing services in the area of environmental sanitation, communicable disease control, the operation of public health laboratories and the provision of transportation in remote or isolated areas. These public health functions are a vital part of health care and cannot, in general, be provided either by private practitioners or voluntary health organizations.

<sup>1</sup> We include here with voluntary hospitals those local community hospitals that are operated by an elected or appointed commission on behalf of local or municipal governments.

On the other hand, some health services can be provided through a government organization, or a voluntary organization or by an individual practitioner. In the case of hospital care, the practice differs according to the province and the type of hospital care. Provincial governments, except in the Province of Quebec, operate most mental hospitals while in half the provinces, provincial governments operate tuberculosis hospitals. Provincial governments in the Atlantic Provinces operate a number of active treatment hospitals, which is rarely done elsewhere in Canada. Laboratory services are another area where the practice differs between provinces as is the provision of immunization, prenatal and post-natal care. We have already referred to the alternative ways of providing home care and rehabilitation services.

Our concern has not been primarily with *who* should provide all the various health services that Canadians need but rather *that they are provided*, and, when provided, are of a high quality. If local communities and provincial governments choose to provide home care, rehabilitation, home nursing and other services through public health departments because they believe this is the best way to maintain a high quality and an effective service there is no inherent reason why they should not do so. Those communities that wish to continue to operate school health services or well-baby clinics can do so. Where provincial or municipal governments operate hospitals we have not recommended that their sponsorship be changed. We do not wish to see governments take over the responsibility for operating voluntary hospitals and in our view there is no reason why they should do so and many reasons why they should not.

The essence of our position is that in the provinces there should be freedom of choice in the type of institution responsible for sponsoring health services. Diversity, with its possibility of experiment, innovation and improvement, is preferable to a completely uniform or centralized programme. Since each province is free to develop its own pattern for providing services there is ample room for experimentation in the search for the best ways of providing those health services that will best meet the needs of the community.

This does not mean that there will be no change in the responsibility of private practitioners, voluntary organizations and governments for providing individual health services. When all Canadians have access to the services of a physician without financial barriers, personal and preventive health services now provided in hospitals or local health institutions in some instances might become the responsibility of private physicians. With the gradual elimination of the large mental hospital, as patients are treated in psychiatric units attached to general hospitals, it may well be that the mental hospitals operated by provincial governments would be replaced by an expansion of the activities of voluntary or municipally operated hospitals. Again, where regional public health services are closely co-ordinated with a regional hos-



pital service, some services now provided in hospitals may be made available in public health clinics while services now provided in public health clinics may be offered by out-patient departments. Some diagnostic and radiological services may shift from the hospital to the group practice clinic while in the case of isolated practitioners the development of the Health Services Programmes could lead to an increased use of provincial government or regional hospital laboratory services as well as the services of visiting specialists.

We also recognize that in the future there may be some redistribution of the responsibility for the provision of community or public health services within provinces. The size of a province and the stage of development of local government both influence the level at which public health services are provided, and accordingly there are variations between one province and the next.<sup>1</sup> In some provinces public health services such as the transportation of the sick, environmental sanitation, communicable disease control, public health laboratories, public health nursing and fluoridation may be the direct responsibility of the provincial department of health, in other provinces responsibility may be allocated to regional divisions, while in still other provinces municipal governments will share in these tasks.

In view of the diversity of arrangements arising out of historical development it is not possible, nor at this time desirable, to recommend a standard form of organization for the provision of public health services. What we are concerned with is that, whatever the distribution of responsibility for providing these services, gaps should not be permitted to exist and public health services be co-ordinated with those provided by voluntary organizations and private practitioners. We have stressed this point strongly in our examination of the provision of services associated with home care and rehabilitation programmes and we wish to emphasize it again here.

In our recommendations designed to improve the health care available to Canadians, in addition to homemaker and public health nursing services associated with the home care programme, we also recommended that organized ambulance services, community mental health clinics and children's dental clinics be established. These services may be provided under the auspices of voluntary hospitals or voluntary health organizations, but if they are not so provided, they must then be provided at either the provincial or local level of government. The extent to which governments will directly be involved in the provision of these services will therefore depend on the alternative forms of organization that provinces and communities wish to develop. If the provision of such services is not undertaken by any other organization, then provincial or local governments must necessarily do so. Canada's health needs must be met no matter who does it.

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<sup>1</sup> See Hastings, J. E. F., *Organized Community Health Services*, a study prepared for the Royal Commission on Health Services, Ottawa: Queen's Printer (*in press*).

We do not envisage any increased responsibility of the Federal Government for the direct provision of health services. The responsibility of the Federal Government for health research and statistical organization has been considered in Chapters 4 and 5. Statutory responsibilities involving the provision of personal health services such as Civil Service Health, Civil Aviation Medicine, Quarantine and Leprosy, Immigration Medical Services, will continue. Administration of health services for Indians and Eskimos in the provinces, as recommended by us in Volume I to ensure that all residents of a province will receive equal treatment, would change federal activities in these areas.<sup>1</sup> Similarly, the Department of National Health and Welfare would continue to provide environmental sanitation services for the Federal Government and to provide consultative services to the provinces in various areas, as well as carry out its statutory responsibilities in the area of food and drug control.<sup>2</sup>

Our proposals are not intended to affect the provision of health services to specific groups. Thus, health services to members of the Armed Services and to veterans, and the planning by Emergency Measures Organization for catastrophic events will continue to be under the direction of the existing agencies. It will be noted in this connection that the proposed organization of health services for the civilian population will enhance the effectiveness of these services in the case of an emergency.

It is not possible to produce an all-inclusive blueprint for the future provision of health services that would meet all contingencies. We cannot and do not wish to specify who should provide each and every health service. What we foresee is not a vast centralized bureaucratic organization solely responsible for the provision of all services with little opportunity for individual initiative and responsibility. Even though efficiency and responsibility are characteristics of large private and public corporations as well as government departments, the special nature of health services in Canada has led us to support a decentralized system in the provision of health services which is in keeping with the federal nature of this country and the historical development of this area of service.

### *Administration and Planning of Health Services*

Since the provision of health services will continue to be the responsibility of a variety of health personnel and organizations it is vitally necessary that the administrative arrangements that are developed will facilitate the co-ordination, improvement and planning of health services as well as the participation of representatives of consumers and producers in the decision-making process.

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<sup>1</sup> See Volume I, Chapter 2, Recommendation 1(11), p. 21.

<sup>2</sup> See Volume I, Chapter 8.

In Volume I, when discussing the manner in which services would be made available under the Health Services Programmes we stated that all improvements in organization also should take place within the spirit of the Health Charter. We repeat here the relevant statements.

All administrative organizations and procedures must be directed to maintaining and enhancing free, independent and self-governing professions.<sup>1</sup>

Administration at the provincial level should be by a Commission representative of the public, the health professions, and government, reporting to the Legislature through the Minister of Health. It should also assume administration of the hospital insurance plan in the province. The provincial government should be represented on the Commission by the Deputy Ministers of Health and Welfare. There must be committees representative of the various professions to advise on professional matters and the members of these committees as well as the professional members of the Commission should be appointed only after consultation with the respective professions.

Provision must be made at local, regional, provincial and federal levels for representative Health Planning Councils to ensure democratic participation in the setting of goals and objectives and the formulation of proposals for meeting human needs.

The Federal Government should share in the administrative costs of the Health Services Programmes to a maximum not to exceed 5 per cent of its total contribution.

The finances for the Programmes must be sufficient to provide a high level of remuneration to health personnel, for the health profession must attract and retain a larger proportion of young people in the future than they have in the past.

The purpose of these recommendations is to ensure that the best possible health care for Canadians becomes an objective of policy implemented in accordance with Canada's evolving constitutional arrangements. Within the organizational framework that exists to facilitate the achievement of this goal the health professions, academic institutions, and hospitals must retain their right to self-government. In establishing the methods and the means whereby this goal is achieved there must be full participation, co-operation and consultation involving the health professions, voluntary organizations, hospital organizations, municipal, provincial and federal governments and representatives of the general public.

With the achievement of the best possible health care for Canadians as an objective of national policy it is essential that the administration, planning, and improvement of health services must be the responsibility of organizations that are primarily concerned with health and health needs.

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<sup>1</sup> See Volume I, Chapter 2, Recommendation 1, pp. 19-21.



The establishment of a comprehensive universal health services programme financed through prepayment arrangements removes the provision of health services from that area which has been loosely called welfare. In such a programme access to the health services needed to maintain and improve the health of Canadians will no longer depend on income, age or condition but on the needs of individuals as defined by professional practitioners. In view of the benefits, both human and economic, that ultimately will ensue from such a development, the abandonment of the welfare approach to the provision of health care must be recognized as a forward step. However, health organizations must also be aware of developments in other areas or of the impact of their own activities elsewhere. Government bodies, both provincial and federal, will have to weigh the demands of the health services sector against all other demands on the resources of the Canadian economy. Clearly, housing facilities, educational facilities, recreation facilities, along with counselling services provided by social agencies all influence health and their activities must form part of the body of information needed for decision-making by health organizations. Decisions made by health organizations in the area of hospitalization, home care and rehabilitation all have consequences for other organizations that must be recognized. Health organizations cannot be oblivious of the impact of their activities on the over-all development of the economy.<sup>1</sup>

But such activities are not part of the primary responsibility of health organizations. These must concern themselves with ensuring that the conditions needed for the improvement of health services are established and maintained. The administration, planning and improvement of health services should be their paramount concern. All else is secondary.

#### PROVINCIAL ADMINISTRATION

Because they have essentially different functions we recommend that the administration of health services at the provincial level be carried out by two organizations: provincial (and regional or local) Departments of Health and Health Services Commissions. Departments of Health would bear the responsibility for public health services; provincial Health Services

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<sup>1</sup> It is, of course, evident that the demands of the Health Services Programmes and the educational programmes and capital facilities associated with them cannot be treated in isolation from the total resources available to the Canadian economy and from other demands made on these resources. In Volume I, we have suggested that in view of the growth of real per capita Canadian income over the foreseeable future, the allocation to the health services sector of the economy of the resources required to operate the programme is unlikely to have a deleterious effect on the economy. On the other hand, the timing of the introduction of new programmes, the rate at which new construction is undertaken—once the crash programme is completed—must depend on the state of the economy at any particular moment of time. It is beyond our Terms of Reference to examine the methods whereby expenditures on health services are reconciled with total expenditures and the various alternative ways of using all the resources available to a nation. That all governments will carry out such evaluations when introducing Health Programmes is certain. One of the roles of Health Planning Councils must be to make governments and taxpayers generally aware of what resources are required for high quality health services programmes and the benefits that accrue to Canadians from such programmes.

Commissions the responsibility for personal health services provided under provincial Health Services Programmes. We recognize the need for co-ordination in these two areas at the provincial government level and have recommended that the provincial Deputy Minister of Health be a member of the Commission *ex officio*. We also comment on the relationship between the Commission and regional and local Departments of Health in Chapter 8.

A Health Services Commission, free from the responsibility for directly providing personal health services, representative of the professional groups concerned, as well as of the provincial government and the general public, and with access to the knowledge and requirements of the health professions, the voluntary organizations, local governments and the public, through its membership and through planning councils, will be able to develop the personal health services that the people of a province require. Similarly, Departments of Health will be able to concentrate on the development and improvement of those public health services that a modern community increasingly needs. It has been suggested however, that, with one provincial administrative body charged with the organization of all personal health services within the Programme, this may have as its consequence the diversion of funds from one category of health services to another resulting in a reduction of the quality of care in the first area. With one organization responsible for administering all the funds, the budget for any one fund could prove to be inadequate.

A number of points must be considered in these circumstances. The first, and of overwhelming importance, is that Canadians in accepting the principle of prepayment of health services through federal-provincial programmes must provide sufficient revenue to retain and attract the health personnel needed to operate all programmes. If the growing population of Canada is to receive adequate health services of improving quality, the supply of qualified personnel must continue to increase and at a more rapid rate. This can only come about if the health professions become more attractive. In Volume I of our Report we referred to the expressed willingness of Canadians to pay for the benefits of a comprehensive health care programme and the necessity of Canadians to be made aware of the relation between the taxes and premiums that they would pay and the health services they would receive.<sup>1</sup> In view of these recommendations, the over-all funds available to finance the programmes should be adequate.

In addition, in the financing of a comprehensive universal health services programme, we concluded that the best method of implementing such a programme was through the establishment of health insurance "funds" along lines similar to the Hospital Insurance Programmes. Thus each health service would be financed from its own Fund to which the federal and

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<sup>1</sup> See Volume I, Chapter 21, pp. 878 and 879.

provincial governments would contribute and to which other ear-marked revenues would be allocated. There would be, therefore, a separate federal health grant for each of the recommended services, for example, a separate Medical Services Fund, a Dental Services Fund, etc.

Such an approach would alleviate the fears of those who believe one programme would be sacrificed to develop another.

Despite the provision for separate insurance funds this does not mean that the development and planning of individual health services can take place in isolation. The provision of hospital, medical, prescribed drug, prosthetic and home care services are so intimately bound up one with the other that they cannot be administered separately. The establishment of the best possible health care for Canadians requires that Canadians obtain high quality health services and also that health resources are used in an economical way. It is evident that these objectives are closely related. What is not always realized is that they can be related in two ways. It is true that if the health services sector is starved for resources then the quality of health care must deteriorate. It is also true that the indiscriminate allocation of resources to a particular health service without a thorough examination of the consequences of this act may result in a lower quality of health care in aggregate as resources are diverted from other areas that could conceivably yield a higher return in health improvement.

To a substantial extent the provision of hospital services illustrates these points. If insufficient hospital beds are built, then the quality of health care suffers. Alternately the use of scarce resources to expand active treatment hospital beds may lead to a failure to provide chronic hospitals, or hospital-based home care programmes and out-patient departments. Patients may then be treated in inappropriate conditions while physicians, nursing, and other health services may not be used to the best advantage. Both the economic use of scarce resources and the quality of health care would be affected by this decision.

This possibility illustrates the desirability of regional planning to take into account more than just hospital beds. It must take into account the needs of local communities and the consequences of the plan for the distribution of physicians' services, nursing services, dental services, prescription drug outlets, paramedical and other personnel, since all these would be affected and in turn affect the distribution of hospital services. The over-all needs of the community must be reconciled with the needs of individuals whether these are consumers or suppliers of health services. We examine this problem in somewhat more detail in Chapter 8 but it is evident that its satisfactory solution can only take place within an administrative organization which is responsive to the needs of all groups and is responsible for the administration of all aspects of health services.



The problem has been stated appropriately by the Advisory Committee on Hospital Insurance and Diagnostic Services in connection with the present and future costs of hospital services in Canada.<sup>1</sup> The Committee pointed out that hospital services formed an important part of total health services and that factors in other areas contributed to pressures which, in many circumstances, added to the cost of hospital services. These factors would need to be considered in their relationship to hospital services. The Committee believed that principles should be developed which could serve as guides to the various provinces in the development of hospital services which would best meet their individual needs. Such an appraisal should be on a continuing basis since hospital services are part of a dynamic process which must reflect changing patterns of health care. The primary purpose of this appraisal would be to establish principles which could be incorporated into the planned development of essential health services with cost being kept constantly in mind and balanced against the value of the arrangements in terms of high quality health care for the Canadian people.

Our recommendation that the provincial Health Services Commissions should assume responsibility for the administration of the provincial hospital insurance plans will ensure that within each province the development of all personal health services will take place within an administrative organization that minimizes duplication of services, that permits the development of integrated services, and that is responsive to those who use and those who provide health services.

An important function of Health Services Commissions will be the evaluation of the Health Services Programmes. The formulation of standards of quality health care and particularly the evaluation of high quality professional practice is not an easy task. Yet the task already begun by professional and hospital organizations along with various government agencies must be carried further and a Commission, through its own personnel, its staff and its advisory committees, must participate in this development.

With the representation of health professions on the Commissions, and the establishment of professional committees advising the Commissions on professional matters, we can be confident that the Commissions will be equal to this important task.

To meet their various responsibilities Health Services Commissions must, if the size of the province or regional diversity warrants it, create regional Health Services Co-ordinators whose responsibility would be to maintain close contact with regional or municipal health organizations, planning councils, other organizations, and individuals providing health services within the region. Such a co-ordinator would be aware of local

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<sup>1</sup> Submission of The Advisory Committee on Hospital Insurance and Diagnostic Services to the Government of Canada, Ottawa, January 31, 1964.

problems, he would be a source of information for members of the health professions, public officials, Health Planning Councils, as well as the Commission. The role that such a person could play and the qualifications needed for these tasks are discussed in some detail in Chapter 8.

The responsibilities of the Health Services Commissions are great and the manner in which they are carried out will largely determine the success or failure of the Health Services Programmes. With independence and qualified staff there is no reason why they should not succeed. The semi-autonomous nature of these bodies should attract competent staff and provide them with the opportunity to seek out new solutions to health problems. They will be bolstered in their endeavours by close association with Health Planning Councils and with those providing services.

#### FEDERAL ADMINISTRATION

The Department of National Health and Welfare will continue to be the body responsible for the administration of all health grants provided by the Federal Government except for research in the health sciences which would be transferred to the Health Sciences Research Council. It would be responsible therefore for the administration of all Health Services Grants, the Public Health Grant, Professional Training Grants<sup>1</sup> and grants made from the Health Facilities Development Fund. It would also continue to provide consultation and information services in these areas.

Because of the significant role of the Department in this area it is of crucial importance that it co-operate closely with all other organizations involved in the administration and planning of health services, especially those at the federal level.

Our concern for democratic participation in the setting of methods and objectives, and our knowledge that the achievement of objectives requires the co-operation of all groups affected, led us to recommend that a Health Planning Council of Canada be established at the federal level, such a Council to be responsible for the planning of health services and to report to Parliament annually through the Minister of Health. Again, because of our awareness of the need for an independent body to undertake research into the evaluation of Health Services Programmes—research that is difficult to carry out by those responsible for the actual administration of the Programmes—we have recommended that the Health Sciences Research Council undertakes these tasks as a part of its broad responsibilities in the area of health research.

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<sup>1</sup> Although any line of demarcation in this area must necessarily be an arbitrary one, we envisage the Health Sciences Research Council bearing the responsibility of administering grants for the training of professional research workers where training involves the conduct of research and the Department bearing the responsibility for the administration of other professional training grants.

This does not mean that the Department will not have to be concerned with the improvement of the Health Services Programmes and Public Health Programmes, or with the development of the facilities and manpower needed to operate these Programmes. Clearly the administration of the grants associated with these Programmes implies an awareness of the methods and objectives of the Programmes. On the other hand, if the Health Planning Council of Canada and the Health Sciences Research Council are to perform their broader functions, this can be done only in the closest co-operation with the Department. With the Health Planning Council reporting to Parliament through the Minister of Health and the Health Sciences Research Council to the Committee of the Privy Council on Scientific and Industrial Research such co-operation should be readily achieved. The evaluation and planning of future health services require that the shortcomings that have existed in the past be eliminated. It will be the joint responsibility of the Department, the Planning Council of Canada and the Health Sciences Research Council to see that it is done.

Over the last century, the Canadian Government has administered its health functions in various forms ranging from a separate Department of Health to branches of a department considered to be performing related functions. From Confederation until 1872 federal health activities were under the control of the Department of Agriculture. The various health programmes were later divided among the departments of Marine and Fisheries (marine hospital service), Inland Revenue (proprietary and patent medicines), Immigration and Colonization (immigrants' medical services), and Trade and Commerce (food and drug laboratory). There also existed, operating under the Conservation Commission, a National Council of Health which dealt with matters relating to public health. A new emphasis on health led the Canadian Medical Association and voluntary health organizations to petition the Federal Government for the establishment of a health department which came into existence in 1919 as the Department of Health.<sup>1</sup> Its merger, in 1929, with the Department of Soldiers' Civil Re-Establishment, whose responsibilities were then declining, led to the creation of the Department of Pensions and National Health.<sup>2</sup>

The Second World War greatly increased activities related to veterans of both World Wars and led to the transfer of the Pension Branch to the new Department of Veterans Affairs. At the same time, welfare matters such as old age pensions and family allowances had become a major and recognized concern of the Federal Government and these, related in some degree

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<sup>1</sup> *Statutes of Canada*, 1919, 9-10 George V, Chapter 24, an Act respecting the Department of Health.

<sup>2</sup> *Statutes of Canada*, 1928, 18-19 George V, Chapter 39, an Act respecting the Department of Pensions and National Health.



to health problems, in 1944 were combined with health functions to form the new Department of National Health and Welfare.<sup>1</sup> Since then many functions have been added to both the Health and the Welfare Branches of the Department. In the health field we refer particularly to the National Health Grants Programme and the administration of the Hospital Insurance and Diagnostic Services Act.

As the responsibilities of the Health Branch of the Department will increase in the future, arising from our recommendations generally and particularly those relating to the Health Services Programmes, health manpower and facilities, and the Food and Drug Directorate, a review of the administrative structure of the Department is imperative. We are convinced that a separation of the two branches of the Department has become necessary and would benefit both health and welfare services. Such a move would be in keeping with our recognition that health expenditures are primarily an investment in human capital and not welfare expenditures.

Most provinces at one period combined provincial health and welfare services in one department. Ultimately, these have again been separated, especially since the inauguration of the Hospital Insurance Programme. The last province to separate health and public welfare functions and to establish separate departments was the Province of Manitoba which did this in 1961.<sup>2</sup>

*The Commission recommends:*

- 227. That, in view of the growing responsibilities of the Department of National Health and Welfare in both the health and the welfare fields, and particularly in view of the increased responsibilities that would be placed on the Department with the implementation of the Health Services Programmes, and taking account of the advisability of administering health services separately from welfare services, the Health Branch be restored to the status of a separate Department of Health.**

*Health Planning Councils*

In its recommendations relating to the establishment of Health Planning Councils the Commission had two objectives: first, to ensure that in any attempt to eliminate divergences between private and social interests all parties affected are consulted and participate in the recommendations

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<sup>1</sup> *Statutes of Canada, 1944-45*, 8 George VI, Chapter 22, an Act to establish the Department of National Health and Welfare.

<sup>2</sup> Based on Special Committee on Social Security, *Health Insurance*, Report of the Advisory Committee on Health Insurance, Ottawa, 1943; and *The Federal and Provincial Health Services in Canada*, Second Edition, Canadian Public Health Association, Toronto, 1962.

made, and second, to ensure that the future needs of Canadians be met in an effective and timely manner.

We have emphasized that in an area of human activity, as large and as complex as health services and characterized by rapid and scientific change, the need for careful and far-sighted planning cannot be avoided. Nor can such planning proceed in one province or region without an immediate concern for what is happening elsewhere.

In view of the public responsibility for the provision of health personnel and facilities it is therefore necessary for some public or semi-public body to accept the responsibility for establishing the future needs of the community, the region, the province or the nation. Such functions must, of course, be part of the general activities of all organizations concerned with the provision of health services or the education of health personnel. Professional associations, departments of health, departments of education, departments of labour, and voluntary organizations all must assess future needs as part of their general activities. Health Services Commissions too cannot carry out their responsibilities without a continuing reappraisal of the present and future needs of the provinces. The Federal Department of Health, assuming a separation of its welfare and health functions, as part of its administrative responsibilities also must be concerned with the future needs of the nation, particularly those that fall within the responsibility of the Federal Government.

But the desirability of bringing to bear all the knowledge available, and the need to provide some means for ensuring the co-operation of all those affected by change, have led us to recommend that representative local, regional, provincial and federal Health Planning Councils be established and charged with the responsibility of establishing future health needs and the resources and programmes required to meet them.

Health Planing Councils must create the climate of opinion in which the co-ordination and effective organization of health services and facilities can take place. Where change and adjustments must be made they will only occur if the necessary consensus is developed by the planning councils—if those affected by change see and approve the reasons for them.

Since some changes will take place in the area of hospital services, medical services, dental services, home care services, rehabilitation services, and public health services, there must be strong representation from medical societies, dental societies, nursing associations, voluntary health organizations, and local government on regional and local councils. Quarterly meetings of regional health councils do not seem too many if they are to become a unified group and to have the necessary influence.

Provincial, regional and local Health Planning Councils also must take the responsibility for indicating, in the light of prevailing conditions,

how preventive, treatment and rehabilitation services are to be co-ordinated at the local level, how personal and public health services are to be integrated, how the isolation of the public health officer from the mainstream of medicine is to be remedied. There may be a good case for ensuring that the administrative areas for hospital services and community health services be coterminous. Such development would certainly permit the most efficient use of the Regional Health Services Co-ordinator.

Just as a provincial health plan or policy cannot be determined by government fiat but must flow from the needs of the community, so must a federal health policy flow from the expressed needs of all Canadians. Policy must evolve through the co-operative exploration of health problems, of existing arrangements and alternative solutions.

The implementation of the Commission's recommendations and the revision of plans and policies that will take place in the future require that at the federal level a Health Planning Council of Canada take the responsibility for ensuring that the health needs and problems of all Canadians are considered as a whole. With representatives of major organizations in the field of health, with representatives of business, labour, and agriculture, with representatives of those who both use and provide health services, this Council can interpret the wishes of Canadians to Parliament and provide a powerful source of information for the Federal Government as well as for provincial Planning Councils, Health Commissions and federal-provincial co-ordinating bodies.

The value of Health Planning Councils will depend on the quality of their recommendations. If Councils are to contribute to the development of high quality health services, if they are to provide the fundamental objectives and plans on which action will be taken, they must have available competent staff. Too often is it the case that a planning council is established without responsibility, without staff and in a short time falls into disuse. Councils must have available to them the administrative staff they need to carry out their responsibilities in an effective manner.

Although Health Planning Councils must possess a small executive staff to formulate recommendations about the future developments of health services, their success will depend on the availability of information. Because of the composition of Health Planning Councils, and because they are not involved in the administration of the Health Services Programmes, it would be quite difficult for Councils themselves to collect all the information, particularly the statistical information, they would need for their decisions. We recognize that this is so and we envisage that much of this information will be provided through the establishment of technical committees or by those organizations directly engaged in either statistical collection or programme administration.



Where provincial Health Planning Councils or the Health Planning Council of Canada are concerned with general health problems, they would have access to the advice of professional and technical committees drawn from the relevant disciplines. For example, the Health Planning Council of Canada when examining the problems of mental health would obtain a report from an Advisory Committee on mental health, representative of those with special knowledge in this area.

We believe that at the provincial level, the Health Services Commission should be charged with the responsibility for carrying out projections of provincial (and regional) needs for personnel, facilities and research and that it should submit an annual report to the provincial Health Planning Council and prepare any special studies requested. Similarly, the Health Sciences Research Council should make projections of Canada's need for personnel, facilities and research on behalf of the Health Planning Council of Canada and submit annual reports to this Council. It should also carry out any special studies that the Council may request.

The planning of health services, and with it the supply of health personnel and capital, cannot be avoided. In such planning, projection of future requirements is inevitable. The question is not will projections be made but how they are made. An ordered investigation of what is going on is a necessary condition for initiating policy. Planning tools such as standard bed ratios, population-personnel ratios or measures of occupancy rates that are now available, must be supplemented by more reliable and detailed guides. The objective should be the establishment of "moving plans" whereby the assumptions upon which the recommendations of the planning councils are based, as well as the implementation of the recommendations, are checked annually and revisions made and incorporated. If the quality of decision-making is to improve, it must be possible to recognize quickly divergences from a plan and to minimize errors. Planning Councils and all other health organizations must co-operate to see that this is done.

With access to data from other organizations and with the body of knowledge available to its members, Health Planning Councils should be able to provide a continuing assessment of Canada's future health needs which would be both realistic and forward looking: realistic in the sense that it is based on the best statistical information available and the intimate knowledge of those who represent local areas, regions and provinces; forward looking in that it would seek not merely to maintain the existing level of achievement but strive to attain the best possible health care obtainable in terms of the findings of health research and of the resources available.

We cannot emphasize too strongly that if Health Planning Councils are to succeed they must feel that the tasks they perform are important and that their recommendations are a fundamental part of the knowledge used

to establish and to adapt health programmes. If these conditions exist, Canadians from all walks of life, but particularly from the health professions, will be willing to serve on planning bodies. Men of intelligence and energy will be willing to undertake the arduous tasks that voluntary participation in such bodies requires.

Through the co-operative planning carried out by Health Planning Councils, the health needs of the country can be established and the positive interests of professional groups, voluntary organizations, local government boards and indeed all concerned with the maintenance of flexibility at the local level, and decentralization of administration, can be fulfilled. In establishing patterns of co-ordination and standards of quality, decisions would not be made by some bureaucratic body and handed down without discussion or consultation. Rather recommendations will spring from those who are closely affected by policies and by programmes. They will be produced by those who know what are the health needs of the community.

### *Federal-Provincial Co-operation*

One of the areas where consultation and co-operation are essential is in the relationship of the provincial and federal governments with respect to both policy and the administration of the Health Services Programmes. Here we propose two organizations, the first a Federal-Provincial Health Ministers Conference, and the second a Federal-Provincial Health Services Co-ordinating Committee.

The need to discuss issues of health services policy has led to the holding of periodic meetings between the Minister of Health of the Federal Government and the Ministers of Health of the provinces. We see such meetings being continued annually, with special meetings where necessary, to discuss issues of health services policy that may arise in the future.

The Federal-Provincial Health Ministers Conference would have available to it the recommendations from provincial Health Planning Commissions, the Health Planning Council of Canada and the Federal-Provincial Health Services Co-ordinating Committee, along with information developed by Departments of Health, Health Services Commissions and the Health Sciences Research Council.

The Federal-Provincial Health Services Co-ordinating Committee should consist of the chief executive officer of provincial health departments and health services commissions in the provinces and territories as well as the Deputy Ministers of the Federal Departments of Health and Welfare. The Deputy Minister of Health should act as chairman of the Committee. This Committee would act as the co-ordinating body for all administrative matters involving interprovincial and federal-provincial relations in the area of health services and resources.

The organization presently carrying out these functions is the Dominion Council of Health, consisting of the Federal Deputy Minister of Health who is chairman, the chief executive officer of the provincial Departments of Health and other persons, not to exceed five in number, appointed by the Governor in Council for a period of three years.<sup>1</sup> The duties and powers of the Council include:

- (1) The consideration of matters relating to the promotion or preservation of the health of the people of Canada and the initiation of recommendations and proposals to the Minister of National Health and Welfare and other appropriate authorities in regard thereto;
- (2) The furnishing of advice to the Minister of National Health and Welfare in respect to the matters provided in section 5 of the Department of National Health and Welfare Act, relating to the promotion or preservation of the health of the people of Canada, over which the Parliament of Canada has jurisdiction.

In the performance of its duties the Council establishes advisory committees and sub-committees on both general and technical health problems. In establishing advisory committees the Council can consult with such persons as it feels necessary, and has done so.

In the organizational structure recommended by the Commission, the responsibility for the development of recommendations relating to the promotion or preservation of the health of the people of Canada lies with the Health Planning Council of Canada. In these areas, the Health Planning Council of Canada, like the Dominion Council of Health would have access to the services of technical and other committees. The Federal-Provincial Health Services Co-ordinating Committee would have access to their recommendations.

On the other hand, many of the problems discussed and resolved by the Dominion Council of Health are public health problems of a more specific or technical nature. For example, the Council has sponsored advisory committees and received reports on immunization, epidemiology, hepatitis, the medical aspects of motor vehicle accidents, the disposal of radio-active wastes, the problems relating to the sale of meat, etc. The Federal-Provincial Health Services Co-ordinating Committee, like the Dominion Council of Health, clearly must continue to be concerned with these issues. What has to be decided is the source of technical and other advice.

Here the Health Sciences Research Council and the Federal Department of Health can play an important role. In areas of more fundamental research, the Health Sciences Research Council would have access to the skills and talents needed to prepare reports for the Co-ordinating Committee. In

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<sup>1</sup> *Statutes of Canada, op. cit.*, s. 7(1).



more technical areas, the Committee could draw on the resources of the Federal Department of Health or on advisory committees established on its behalf by the chairman of the Committee, the Federal Deputy Minister of Health.

The Deputy Minister of Health, as chairman of the Committee, since he administers both public and personal health services grants, will be able to co-ordinate much of the information that the Committee will require. He will have access to the reports of the Health Planning Council of Canada and the Health Sciences Research Council, the other major sources of information and advice.

This federal-provincial organization should provide an important clearing-house for clarification of mutual problems and for the co-ordination of programmes and policies in all areas of health.

### A SUMMARY DESCRIPTION OF HEALTH ADMINISTRATIVE ORGANIZATIONS<sup>1</sup>

In summary, we foresee the various administrative bodies that we have recommended as taking, in general, the following forms and having, in general, the following functions.

#### *Provincial Health Services Commissions*

To ensure that the provincial Health Services Commissions would be representative bodies we have recommended that they should consist of a chief executive officer or chairman and representatives of the public, the health professions and government. The government representatives would consist of the Deputy Minister of Health and Deputy Minister of Welfare who would be *ex-officio* members of the Commission. The representatives of the health professions and the public would be appointed from panels nominated by professional bodies and lay organizations. In this situation the professional members of the Commission would be appointed only after consultation with the respective professions. A Commission would be responsible to the provincial legislature and report through the Minister of Health.

The principal responsibilities of a Health Services Commission would be five. First, to be responsible for the administration of the various Health

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<sup>1</sup> This summary is limited to the administrative aspects of health care, where organizations are engaged in the provision of public or personal health service such activities have been described elsewhere.

Services Funds<sup>1</sup> and the Health Facilities Development Fund. Second, to provide advisory and consultant services to those individuals and organizations providing health services. Third, to carry out medium- and long-term projections of the provincial needs for personnel, facilities, health research and organization on behalf of the provincial Health Planning Council and submit an annual report to the Council. Fourth, to receive the recommendations of the provincial Health Planning Council in the areas of programme development, personnel, facilities, research and organization. Fifth, in the light of these recommendations to ensure that the development of the Health Services Programmes takes place in an orderly fashion and that in this process close liaison is maintained with all those providing health services.

Under the Health Facilities Development Fund, a Commission would be responsible for the administration of Hospital Construction Grants (which would become a part of such a fund) and for grants to assist in the provision of medical, dental, public health, nursing and other health profession educational facilities, including medical schools, dental schools, schools of public health, schools of nursing, basic science buildings and equipment. Under the Dental Construction and Equipment Grant a Commission would be responsible for the provision of facilities associated with the Children's Dental Health Programme.<sup>2</sup> Although the provincial Departments of Health would continue to be responsible for grants made under the Professional Training Grants, a Commission would co-operate with the Departments of Health and Education and with provincial universities in the development of this area. Finally, as part of its responsibility for administering Health Services Funds, a Commission would be responsible for paying for services rendered within any of the Programmes by the professions, hospitals (both voluntary and government operated), voluntary health organizations and departments of health.

A Commission would also be charged with the responsibility for negotiating fee schedules, or rates of payment for services rendered, with the appropriate professional bodies or health organizations. In this area we

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<sup>1</sup> In our Recommendation 120, in Volume I, we stated that regulations made under the Hospital Insurance and Diagnostic Services Act be interpreted to cover the cost of patient care provided by hospital-based home care programmes. Recommendation 121 stated that the regulations made under the Hospital Insurance and Diagnostic Services Act be interpreted to include as a shareable cost, payments made to community-based home care programmes for care provided to hospital patients returned to their homes but retained on the hospital register. Recommendation 122 stated that the Public Health Grant be used to assist in financing community-based home care programmes. Since the Hospital Insurance and Diagnostic Services Grant would be administered by the provincial Health Services Commission and the Public Health Grant by the Department of Health it is suggested that the funds made available under the Public Health Grant for home care programmes be transferred to the Health Services Commission for administrative purposes.

<sup>2</sup> Financing group practice clinics would be carried out through loans made available under the National Housing Act.

have recommended that where there is inability to agree there would be provision for an appeals procedure within the province.

In its administration of the various health funds a Commission would be charged with the responsibility for evaluating the success of the programmes including the conduct of statistical research in this analysis. Such evaluations would be carried out only by appropriate professional personnel in co-operation with professional advisory committees appointed after consultation with the respective professions or hospital associations. In this manner the quality of health services will be determined by those with professional responsibility for improving the quality of health services.

A Commission would also be charged with the responsibility for initiating the organization of new services recommended by the provincial Health Planning Council. Among the first tasks would be to ensure that where home care and rehabilitation programmes were not in operation, steps be taken to develop them either through voluntary organizations or departments of health; that the recommendations relating to the mentally ill and retarded and crippled children are implemented; that immediate efforts be made to develop the children's dental and optical services programmes.

### *Provincial Health Planning Councils*

To ensure democratic participation in the setting of goals and objectives of the Health Services Programmes a provincial Health Planning Council should be appointed by the provincial government from panels nominated by professional bodies, voluntary organizations, university, municipal, farm, business, labour and other representative associations. A Council should engage a chief executive officer and staff to be responsible for the Council's activities; it should be financed through funds provided from the administrative funds of the provincial Health Services Commission. It should report annually to the provincial legislature through the Minister of Health.

The principal responsibilities of the Council would be five. First, to make recommendations relating to programme development and the improvement of health services within the province. Second, on the basis of projections developed by the provincial Health Services Commission and the Health Sciences Research Council to make recommendations relating to the provinces' medium- and long-term needs for personnel and facilities. Third, to make recommendations relating to proposals for new voluntary and government activities in the field of health services. Fourth, to make recommendations relating to the co-ordination of the activities of professional personnel, voluntary organizations and governments in the area of health services. Fifth, through a sub-committee on health personnel, to



make recommendations relating to the recruitment and education of health personnel. Such a sub-committee would be advised by, among others, a Nursing Education Planning Committee, a Dental Auxiliary Education Committee and a Committee on Paramedical Personnel, and should work in close co-operation with the provincial Departments of Education and Labour.

Provincial Health Planning Councils must maintain close contact with the Health Planning Council of Canada, the Health Sciences Research Council, the provincial Departments of Health and other institutions responsible for aspects of health care.

### *Regional and Local Health Planning Councils*

Where the size or diversity of a province warrants it, regional and local or municipal Health Planning Councils should be established by provincial governments in the same manner as the provincial Health Planning Council. They should be provided with an executive secretary to work with the Regional Health Services Co-ordinator<sup>1</sup> and with the health officers of regional and local health departments, and they should report regularly to the provincial Health Planning Council. Funds for the operations of these regional and local councils should be made available by the provincial Health Services Commission.

The responsibilities of regional and local Health Planning Councils would be to make recommendations to the provincial Health Planning Council relating to programme development and the improvement of health services in their area, the needs of the region for personnel and facilities, voluntary and government action in the area of health services, and to make the provincial Health Services Commission aware of the impact of health policies on the region or municipality itself.

### *Provincial Departments of Health*

Although the administration of the Health Services Programmes would be the responsibility of the provincial Health Services Commission of which the Deputy Minister of Health is a member, the provincial Department of Health would continue to be responsible for the administration of the Public Health Grant and, in co-operation with the universities and the provincial Health Services Commission, Professional Training Grants. It would also continue to be responsible for the essential and traditional public health functions.

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<sup>1</sup> In some instances it may appear desirable for the Health Services Co-ordinator to serve as Secretary to the Council.

*Federal Department of Health*

The Department of Health, following the allocation of the welfare functions to a separate Department of Welfare would have expanded responsibilities as recommended in Volumes I and II of this Report. It would be responsible at the federal level for the administration of health grants, including:

- (1) Public Health Grants
- (2) Health Services Grants
  - (a) Hospital Services
  - (b) Medical Services
  - (c) Dental Services for children, expectant mothers and public assistance recipients
  - (d) Prescription Drug Services
  - (e) Optical Services for children and public assistance recipients
  - (f) Prosthetic Services
  - (g) Home Care Services
- (3) Professional Training Grants
- (4) Health Facilities Development Grants

In the administration of these grants it would, as it now does, provide advisory and consultant services in connection with specific grants and also carry out programme research.

In the special area of prescription drugs, the Department would be responsible for enlarging its Drug Advisory Committee and the development and publication of a National Drug Formulary and a Drug Information Service.<sup>1</sup>

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<sup>1</sup> See Volume I, Chapter 2, Recommendations 61 and 62, pp. 41 and 42.

"61. That the functions of the Drug Advisory Committee which is responsible for advising the Department of National Health and Welfare be expanded, and its membership enlarged to include representatives of the Canadian Medical Association, l'Association des médecins de langue française du Canada, the Canadian Pharmaceutical Association, the Canadian Hospital Association, the provincial Schools of Pharmacy, the provincial Colleges of Pharmacists, and the provincial Departments of Health.

"62. That the Food and Drug Directorate, with the assistance of the Advisory Committee, prepare and issue a National Drug Formulary which would be maintained on a current basis. This Formulary would include only those drugs which meet the specifications of the Directorate, and would be identified as such, and therefore eligible for inclusion in the Prescription Drug Benefit, one of the objects being to minimize the cost of prescribed drugs. There should be established an appeals procedure for dealing with rejected applications, and an Information Service which would issue periodic bulletins providing the latest information on drugs and drug therapy to physicians, pharmacists, and hospitals."

In Volume II, Chapter 10, addenda to Recommendations 61 and 62, p. 297, we have suggested that representatives of the dental profession be added to the expanded Drug Advisory Committee and that members of the profession receive the bulletins issued periodically by the Drug Information Service.

*Health Planning Council of Canada*

The Health Planning Council of Canada would be concerned with matters relating to the promotion or preservation of the health of the people of Canada.

It should be appointed by the Federal Government from panels recommended by professional bodies, voluntary agencies, business, labour, farm and other associations. It would be financed by the Federal Government and would possess its own chief executive officer and planning staff. It would report annually to Parliament through the Minister of Health and make special reports when requested.

The principal responsibilities of the Health Planning Council of Canada would be first, to study the health needs of Canadians and to make recommendations relating to programme development and improvement of health services; second, on the basis of data supplied by the Health Sciences Research Council and other statistical collection agencies, to study and to make recommendations relating to the medium- and long-term needs for personnel, facilities and health research; third, to study and to make recommendations relating to the co-ordination of the activities of professional, voluntary organizations and governments in the area of health services; and fourth, to seek full and regular co-operation with provincial Health Planning Councils, provincial Health Services Commissions and provincial Health Departments. The recommendations of the Council would be available to the Federal-Provincial Health Services Co-ordinating Committee and to the Federal-Provincial Health Ministers Conference for their consideration.

*Health Sciences Research Council*

The Health Sciences Research Council should be the principal advisor to the Government of Canada in the planning and support of health research and the allocation of research funds. As such, it would be responsible for the assessment of Canada's research needs and would have power to appoint the medical, dental and other professional staff and to establish the technical advisory committees required to fulfil these functions. The organization, financing and responsibilities of the Council have been described in Chapters 4 and 5.

The Council would be responsible for the administration of Health Sciences Research Grants; for participation in the development and maintenance of a continuing system of health statistics and of studies related to the assessment of current health problems and their trends; for the development of medium-term and long-term projections of Canada's needs for health personnel, facilities and research on behalf of the Health Planning Council



of Canada; for the evaluation of intramural research conducted by departments of the Government of Canada in the area of medical, dental and related scientific research; for the evaluation of the effectiveness of the various elements of the Health Services Programmes as a way to improve the quality of health care Canadians receive.

### *Federal-Provincial Health Services Co-ordinating Committee*

This body should consist of the chief executive officers of provincial Health Departments and Health Services Commissions in the provinces and territories and the Deputy Ministers of the federal Departments of Health and Welfare. The Deputy Minister of Health should act as chairman of the Committee. It would be financed by the federal and provincial governments and its members would report to their respective organizations.

This body would act as the co-ordinating body for all administrative matters involving interprovincial and federal-provincial relationships in the area of health services and resources. It would have access to technical and other advice from the various Health Departments, Health Planning Councils and the Health Sciences Research Council.<sup>1</sup>

### *Federal-Provincial Health Ministers Conference*

This body consisting of the Federal Minister of Health and the provincial Ministers of Health would have annual meetings, and special meetings when necessary, to discuss issues of health services policy. It would have access to information and proposals from all other organizations. It would ensure periodic meetings at regular intervals to discuss common health problems.

## CONCLUSION

The Commission has recognized that diversity and decentralization are essential to encourage and permit experiment and improvement. If individual initiative is stifled or regimented then any organization becomes ineffective. The recommended health programmes for Canadians leave individual professional practitioners free to continue their practice as "independent contractors" as is the case for other health organizations. Moreover, with ten provinces each developing its own institutional structure, within that structure is room for diversity, for different solutions to the problems of organizing regional hospital systems, of providing medical services, and all the other programmes and services. The comparative success of each of

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<sup>1</sup> This Co-ordinating Committee would absorb the functions of the Dominion Health Council and carry out the broader responsibilities outlined above.

these different approaches will be evident to all Canadians who can then choose or modify—on the basis of merit.

Having set out what we believe is involved in the comprehensive health care programmes which we have recommended, we want to make clear what is *not* involved in the implementation of these programmes. The pattern of organization will not represent a single, unified, monolithic government-controlled system.

It is not a single system because we visualize ten provincial programmes and separate programmes for the Yukon and the Northwest Territories.

It is not a unified programme in that it permits diversity among different provinces and the Territories, as long as such programmes meet the basic health needs of the nation including universal coverage regardless of age, or condition, or ability to pay.

It is not a monolithic system because it consists of diverse administrative and advisory bodies at all levels of government, federal, provincial and local, that include in their membership representatives of the health professions, the public and voluntary associations, that will be required by law to report to the respective legislatures and to Parliament.

It is not government controlled because of the emphasis on the *co-operative* aspect of planning, implementing and organizing health care programmes in Canada in which all sectors of society and government participate on a continuing basis and also because it leaves the practice of medicine and of dentistry wholly in the hands of physicians and dentists on whose integrity and competence will depend a high standard of professional performance based on free professions in a free society.

But in this complex society we cannot run the risk of having no co-ordination or plan for consistent and adequate growth. All social institutions and professions, all business and government organizations are in the process of adapting to the changes generated by population movement and growth, specialization and the rapid accumulation of knowledge. Universities and their staffs are seeking to adjust to their growth in size, the new tasks required of them, and their integration into business and community life. Even nation states have had to seek for new organizational forms to meet the challenges of an increasingly complex society. The European Economic Community is but one attempt to achieve the co-operation and constructive planning that modern technical and economic change requires.

The provision of health services also must be co-ordinated and planned. What we recommend here is not regimented co-operation and planning enforced by some all-powerful central body but a programme for achieving co-operation and agreement about the objectives we want and the means to achieve them. No matter what attitude to administration or

planning one adopts it is not possible to administer or plan for hospital, medical, dental, optical or drug services separately. The development of a hospital services programme or a drug services programme requires that a medical services programme be considered at the same time. What is crucial is that all affected by indicative planning and by the co-ordination of health facilities have a voice in such developments. We have shown how this can be done by the participation of the public, government and the professions in decision-making and the establishment of policies and targets at the provincial and federal levels and by consultation with interested parties at the regional and local levels.

We recognize that since the funds for the operation of the Health Services Programmes come primarily from the federal and provincial governments there must be some public control over the development of these Programmes. Providing the terms of the Health Charter are observed this control should not be subversive of the ends that all Canadians seek. On the other hand, we believe that the establishment of provincial Health Services Commissions, along with representative Health Planning Councils at all levels, will provide the independence that is needed if these organizations are to attract the talented, responsible and dedicated people necessary to close the gap between the actual and potential level of quality health care. We also believe that the organizational arrangement we have recommended will provide a structure founded upon democratic ideals and practices and in harmony with the evolving federal-provincial pattern of co-operative programmes.

The use of public funds in any form, whether it be to subsidize private insurance funds or voluntary prepayment plans must necessarily involve public responsibility for the expenditure of such funds. As we have demonstrated, the availability and the provision of health services are of public concern whether a universal comprehensive prepayment programme is available or not. But when such a programme is introduced, the public interest is enhanced. Fortunately, the public interest is essentially the same as the interest of those who provide health services—to see that the Canadian public gets the best possible health care.

The organization of any health services must be considered in relation to all other health services. The need of the patient for continuous high quality care and the interest of the community in the use of scarce resources in an effective manner reinforce each other. Effective organization and individual responsibility are not mutually exclusive. Co-operation and consultation can go far to see that Canadians get the best possible health care at a cost that is not beyond the community's capacity to pay and that leaves the professions with the rights and responsibilities that free professions must have if they are to remain independent and creative.



## Co-ordination of Health Services at the Community Level

### INTRODUCTION

At the local level, personal health services are provided by physicians, dentists, nurses, and other health practitioners, acting independently or through hospitals, voluntary organizations, and government agencies. The recommended Health Services Programmes will not alter this existing pattern. Nevertheless, at the local level the problem of the co-ordination of health services must be solved if the Health Services Programmes are to be effective in providing care of high quality in a way which embodies the principles stated in the Health Charter for Canadians.<sup>1</sup>

In Chapter 7 we discussed the recommended future organization of health services at the provincial and federal levels. This chapter deals with the organization of health services at the local or community level. The need for co-ordination at this level was constantly urged upon the Commission by spokesmen for a variety of organizations.

### PRESENT PROVISION OF LOCAL HEALTH SERVICES

We have described the multiplicity of agencies and services which now serve the health needs of our communities. For the patient there are a number of choices. He will most likely turn to a general practitioner, either the one

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<sup>1</sup> It must be clearly understood that we interpret the mention of the *best* possible health care in our Terms of Reference to mean care of the highest possible quality and not necessarily the *most* possible health care. It also means the best possible health care under the prevailing circumstances or conditions. Though every effort must be made to maintain certain minimum standards in all parts of the country, it will be impossible to overcome all differences, and allowances will have to be made for services in certain regions such as sparsely settled areas, particularly in the North.

whom he considers his family physician or one chosen on the advice of friends or neighbours. Similarly, he will seek the services of a dentist. If he attempts self-diagnosis, he may decide to consult a specialist. If it is his eyesight that troubles him, he will choose between ophthalmologist and optometrist. There are osteopaths, podiatrists, chiropractors, and other practitioners he may decide to consult.

In order to provide his patient with high quality care, the physician will want to use all the available services. These may include X-ray examinations, laboratory tests, a course of treatment by a therapist, specialist service and/or admission to one of the several types of hospitals. The great merit of the modern hospital is that it incorporates a wide range of services, including nursing, and a physician can readily treat a number of his patients on his daily hospital round. But there are, in addition, an increasing number of community-based services available to patients, often equally adequate as the services in hospitals and less expensive.

One of the major problems in urban centres where these agency services are numerous is that of communication. As we pointed out in Volume I,<sup>1</sup> the physician needs some kind of assistance in mobilizing such of these services as he requires outside the hospital as well and as readily as he is served inside the hospital.

In point of fact, hospital developments themselves strengthen the case for co-ordination of all services on a broad community basis. The growing complexity, costliness and specialization of the hospital has had far-reaching effects not only on the individual institution but also on the structure of what is emerging as a hospital system.

The modern hospital transcends the financial capacity of many municipalities, and much of the costly modern equipment cannot be used efficiently if it serves only small populations. This necessitates the regional planning of hospitals and in the larger centres a division of labour among local hospitals as far as certain types of expensive equipment and specialized services are concerned. Regionalization would not be possible, however, if modern transportation and communication had not at the same time facilitated travel so that many patients can safely be brought to a strategically located hospital outside their own community. This means a trend towards a degree of centralization of hospital services, particularly in the acute-treatment general hospital and in some of the highly specialized rehabilitation services.

We find, then, that as in many other activities such as trade, industry and education, we have come to think of the community as having a much larger geographic and population base than the traditional self-contained municipality. Modern transportation, communication and the accelerated technical revolution have necessitated planning on a much broader basis

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<sup>1</sup> See Volume I, Chapters 2 and 15, pp. 61 and 624.

than in the past. Regional rather than local planning resulting from these circumstances means the acceptance of objectives determined on a broad regional rather than a limited local basis, leading to a pooling of interest which—though somewhat reducing local autonomy—brings to the less populated areas regular access to the more highly specialized services which can be maintained efficiently only for larger population groups.

Apart from this arrangement of hospitals in terms of their size, location, equipment and hence the services they provide, there has been a shift in establishing certain types of hospitals. The increasing load of chronic illness and the high cost of acute-treatment hospitals have contributed to the separation of the chronically ill in special institutions or wings for the chronically ill and convalescent. On the other hand, with modern treatment methods, effective care can be given to mentally ill and tuberculosis patients in general hospitals. The special facilities required for rehabilitation services have led to the addition of wings to general hospitals as well as to a new type of institution: the rehabilitation centre.

As attempts have been made to co-ordinate hospital services, hospitals have sought to adjust their services to the changing needs of the same patient during his stay in the institution. This idea has received formal recognition by the introduction of the principle of progressive patient care whereby the patient in the same hospital moves from intensive treatment to the self-care stage.

The position of the voluntary community agencies is beset with numerous uncertainties. An agency providing, for instance, physiotherapy services to children or adults must plan its operation with perhaps little or no guidance as to the extent of the problem, or knowledge of similar or related services available. It may also have to make arrangements with service clubs or other community agencies for such services as appliances, equipment, or the transportation of patients. The planning of new services and the adjustment of existing ones is often left to the initiative and ingenuity of individuals or agencies without the benefit of an adequate appraisal of needs and resources. Public health departments more often than not lead an existence of their own, separate from the main stream of personal health services.

These local developments in health services have resulted in:

- (1) a multiplicity of services,
- (2) a multiplicity of auspices, and
- (3) a multiplicity of administrative arrangements.

This multiplicity however, is the natural result of progress made in the health field within the existing framework of Canada's social, economic, and political institutions. Roemer has described similar developments in the United States:

"There can be no doubt that the overall effect of all these social processes is to make American health service more and more socially



organized. Yet the organization occurs in segments. Particular needs are met with particular programs. Actions are taken by government at all levels and by hundreds of voluntary agencies. Special efforts are applied to a certain population group, a certain disease, or for the provision of a certain type of technical service. The focus may be preventive or therapeutic or it may be both. The organization may involve direct provision of some health service by a structural social entity, or it may involve the imposition of certain formal standards and economic arrangements over the provision of services by individual medical practitioners. Social organization may also apply to the world of medical research or professional education."<sup>1</sup>

Clearly, under these circumstances we cannot expect (a) these community services to develop fully, (b) effective use to be made of them, (c) the services to be well planned without gaps on the one hand or overlapping on the other, (d) assurance of a high quality of service, (e) patients and physicians to be aware of and accept these services, unless we plan.

## EMERGING PATTERNS OF LOCAL HEALTH SERVICES

There can be no doubt that with continuing scientific and technological progress, with expanding urban centres and in the absence of planning and co-ordination, such fragmentation of our health services will continue. If we are to reap the full benefits of existing and future scientific advances and provide adequately for the growing load of chronic illness and disability, we must arrange for the co-ordination of the many parts of the health services. This is not a new or revolutionary proposal. Attempts at co-ordination have been going on for many years, rehabilitation services being a notable example.

While the shortcomings of this lack of co-ordination at the community level in the face of an ever-increasing fragmentation and multiplicity of services have become apparent, there have been a number of developments which may mitigate this situation. Among the most clearly discernible new forms of organization are developments in general practice, medical group practice, organized home care, and the co-ordination of a wide range of rehabilitation services.

### *General Practitioner*

Due to a number of developments, the role of the general practitioner in the health services complex is undergoing a re-appraisal. The longer life-span has resulted in an increased number of older people requiring treatment, largely for chronic conditions. A continuing high birth rate has meant that

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<sup>1</sup> Roemer, M. I., "Changing Patterns of Health Service: Their Dependence on a Changing World", *The Annals*, March 1963, pp. 54 and 55.

the general practitioner sees more maternity cases. The increased awareness of psychiatric symptoms by the physician and the public has stimulated attempts to integrate psychiatric services into the main stream of health services with the general practitioner playing a vital role in the early diagnosis and treatment of these disorders. The increasing emphasis on the social as well as the medical rehabilitation of the patient has reinforced the need for the general practitioner with his knowledge of the patient's social environment. The growing knowledge of the importance of social factors in health and illness has served to highlight the continuing care of the whole patient with the general practitioner as the key figure in this arrangement.

Thus, we find in Canada, as in other countries, particularly the United States, two different trends in the pattern of practising medicine. On the one hand, as medical science has advanced rapidly, there has been a strong tendency towards increasing specialization which promises the best possible health care by encouraging research and advanced work in combating specific health problems, both of the body and the mind.<sup>1</sup> On the other hand, there has been increased emphasis on the "wholistic" approach in medical care, with the emphasis on the whole patient, as a man, rather than merely as a disease entity.

Although important medical progress has resulted from increasing specialization in the health field, it has created new problems that may be summed up under the term "medical fragmentation". The situation in the United States has been described as follows:

"...there is no doubt that the fragmentation of medical practice has resulted in the fragmentation of the patient. The situation could easily develop to the point of 57 varieties of specialists but no doctor to treat the individual. The task of putting the patient together again—of re-constructing the 'whole man'—is an essential next step in the progress of medical practice."<sup>2</sup>

This fragmentation of health services has also occurred in Canada, but an opposing trend is evident in the growing recognition of the importance of the general practitioner or "family doctor" in the provision of medical services. The present and future role of the general practitioner has caused uncertainty and dissatisfaction among some practitioners about their function in a profession that has become increasingly specialized; but the new trend stems from basic changes in the pattern of medical treatment and the growing recognition of the patient rather than the illness as the focus of health care.

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<sup>1</sup> For further discussion of the role of the specialists in medical practice, see Volume I, Chapter 7, pp. 248 and 249; Judek, S., *Medical Manpower in Canada*, a study prepared for the Royal Commission on Health Services, Chapter 4, Ottawa: Queen's Printer (*in press*); and MacFarlane, J. A., *et al.*, *Medical Education in Canada*, a study prepared for the Royal Commission on Health Services, Chapter 9, Ottawa: Queen's Printer (*in press*).

<sup>2</sup> Somers, H. M., and Somers, Anne R., *Doctors, Patients and Health Insurance*, The Brookings Institution, Washington, D.C., 1961, p. 33.

With the advancement of scientific knowledge, specialization in medicine will continue to grow, but it will not replace the general practitioner, nor would such a development be desirable, especially in Canada's social and geographic setting. Only in the larger urban centres will all the existing specialties be represented. It is true, on the other hand, that modern means of transportation and communication make specialists' services accessible even to patients at a considerable distance, which means that there is less need for the general practitioner to engage in areas of medicine for which he has not been specially trained.

Although some hospitals, particularly the larger institutions and teaching hospitals, often restrict staff privileges of the general practitioner in favour of the specialist, the former normally treats his patients in a community hospital. His hospital appointment allows him to carry out those procedures in which he is fully qualified. These hospital privileges also enable the general practitioner to consult with the specialist and thereby add to his knowledge of medicine. The continuous association with specialists is probably one of the most effective means at the disposal of the general practitioner for maintaining and improving the quality of the care he provides.<sup>1</sup>

The specialist has assumed some of the functions of the general practitioner: the obstetrician, normal deliveries; the paediatrician, care of children; the internist, uncomplicated medical cases, and so on. In part, this has been brought about by public demand. Notwithstanding this trend there continues to be a need for the general practitioner to retain his role as the family physician. Only he seems to be in a position to treat the whole patient. While he may refer an increasing number of cases to a specialist, referral and consultation may well develop into a two-way flow as patients after acute stages of severe illness are returned to the general practitioner for continued care, the supervision of home care services or rehabilitation procedures. General practice also plays an important and growing role in such fields as health maintenance and mental illness and has a place in the context of group practice.

Thus the future role of the general practitioner is of increasing significance. He will provide both preventive and curative medical services to those under his care on a continuing basis. When complex conditions arise, he will seek advice from his specialist colleagues: "You might call this man a patient-oriented community-based physician".<sup>2</sup>

These developments and the resulting intensive re-appraisal of the role of the general practitioner have implications for medical education. Is it to be based on the present pattern of the basic medical education or on a new

<sup>1</sup> Suggestions regarding the qualifications and training of the general practitioner of the future are contained in MacFarlane, J. A., *et al.*, *op. cit.*

<sup>2</sup> Johnston, W. V., *The College of General Practice in Canada—Its Tremendous Trifles*, Presentation to the Australian College of General Practitioners, Sydney, Australia, October 24, 1963, p. 11.



body of knowledge that warrants separate departmental organization in the medical school and teaching hospitals with teachers having qualifications in this area?

What can be done to equip the general practitioner adequately for the more complex tasks that he is expected to perform in the ever changing pattern of medical practice? The U.S. study, referred to earlier, mentioned a four-pronged approach put forward by various sections of the medical profession:

"1) upgrading the GP; 2) replacing the GP by a better trained type of family or personal physician—the internist and pediatrician are most frequently mentioned; 3) training all doctors in the philosophy and techniques of 'comprehensive care'; and 4) promoting an institutional environment which will facilitate a coordinated approach. These four methods are by no means mutually exclusive although some of their proponents appear to think so. All are worthwhile objectives in themselves. It is to be hoped that experimentation along all four lines will continue. It appears, however, that certain of the approaches are more practical than others and that the fourth, in particular, is the *sine qua non* for effective reconstitution of the 'whole patient'."<sup>1</sup>

In Canada, this question of the future training and role of the general practitioner has been under discussion and review for some time. The establishment of the College of General Practice of Canada was a result of the new attention focused on general practice in an era of specialization. The College was established by the Canadian Medical Association in 1954, after a study had concluded:

- (1) That many physicians of the highest calibre were drawn and should continue to be drawn to the field of general medicine.
- (2) That, in fact, medicine had become so complicated and specialized that the general physician has become even more necessary than before as the patient's medical adviser, as well as personal doctor.
- (3) That the highest standards of health care did not depend upon ever narrowing specialization, but rather that general physicians should be encouraged to and be free to achieve their own standards of practice, comparable to those of the specialists.<sup>2</sup>

For his changing function the general practitioner has to be prepared by emphasis in his education on these new aspects of his practice, aspects which are not now being covered adequately in the specialty-oriented training of the large teaching hospital. Some Canadian medical schools have already begun to add experienced general practitioners to their teaching staff. Medical students in some medical schools can see patients cared for in general practice outside the hospital in physicians' offices, in out-patient clinics, in patients' homes, and in the context of such community services as public health clinics

<sup>1</sup> Somers, H. M., and Somers, A. R., *op. cit.*, pp. 33 and 34.

<sup>2</sup> *College of General Practice of Canada*, brief submitted to the Royal Commission on Health Services, Toronto, May 1962, pp. 5 and 6.

or home care plans. In 1960, the College of Medicine of the University of Saskatchewan stated that during the six previous years from 18 to 22 general practitioners at a time have been acting as clinical teachers, comprising as a group the Department of General Practice of the University Hospital.<sup>1</sup> The report comments very favourably on the contribution rendered by these teachers, particularly in the psychiatric field.<sup>2</sup> Moreover, like all physicians in the face of rapidly growing scientific knowledge and changing medical techniques, the general practitioner needs the continuing education on which great emphasis is being placed by the College of General Practice. "The core of the College's active membership regulations is the unique mandatory requirement of one hundred (100) hours of organized and approved post-graduate study in each two-year period."<sup>3</sup> This the Commission recognizes as a major contribution to the quality of health care, and so necessary has continuing education become that the profession should do all in its power to see that *all* general practitioners meet *at least* these minimum standards.<sup>4</sup>

While the need for the teaching in these new aspects of general practice has been established, the exact role of general practice within the medical school and its curriculum is still under discussion. Is general practice to continue to be part of the physician's basic training? Is it developing into another specialty? Or is it the function of general practice to bring about the synthesis of the various specialties? There are departments of general practice in hospitals. Should there be, correspondingly, departments of general practice in the medical schools?

These questions were studied at a conference called by the College of General Practice in 1962. One of its findings regarding undergraduate medical education was that "a programme must be developed which will give the student a more realistic view of family practice in the community", i.e., more realistic than that which can be derived from the rather selected group of patients who use the out-patient facilities of hospitals. Family physician "preceptors" for students are part of this future programme which the Conference recommended.<sup>5</sup> The Second Conference on Education for General Practice<sup>6</sup> further studied the status of education in general practice within the medical school. At this Conference the problem was clearly identified. The answer must be found to the question of "when does a subject attain departmental status in the university and what are the criteria for the

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<sup>1</sup> The College of Medicine, University of Saskatchewan, *Brief to the Advisory Planning Committee on Medical Care of the Province of Saskatchewan*, Saskatoon, 1960, pp. 55 and 56.

<sup>2</sup> *Ibid.*, pp. 56 and 57.

<sup>3</sup> College of General Practice of Canada, *op. cit.*, p. 7.

<sup>4</sup> See Volume I, Chapter 2, Recommendation 150, p. 72.

<sup>5</sup> College of General Practice of Canada, Conference on "Training for General Practice", November 28 and 29, 1962, Preliminary Report, p. 2. See Report on Second Conference on Education of General Practice.

<sup>6</sup> Sponsored jointly by the Association of Canadian Medical Colleges and The College of General Practice of Canada, Toronto, November 27-29, 1963.

appointment of a professor in this field".<sup>1</sup> The Conference came to the conclusion that, at the time, the setting up of chairs in general practice would be premature, pending the answers to the foregoing questions, but "that the College of General Practice of Canada bears the major responsibility in defining Canadian General Practice and in establishing the body of scientific research necessary to implement education for general practice".<sup>2</sup>

The College of General Practice has already outlined a programme of research.<sup>3</sup> The content of general practice will have to be redefined in view of its yielding certain areas to the specialties while the responsibility of the general practitioner may be extended in others, such as in the care of the whole patient in his family and community, and in psychiatric care, home care and rehabilitation. The developments in these areas of medical care have been rapid in recent years and the recommendations made by this Commission will add momentum to this trend.

It is, therefore, both important and urgent that the general practitioner of the future be fitted for his newly emerging role. We endorse the conclusion that "the continued flow of practitioners into the General Practice field must be assured and will depend on the example of their teachers".<sup>4</sup>

The supply of teachers, on the other hand, depends on suitable conditions for their teaching.<sup>5</sup> The field of general practice includes large elements of preventive, social, and community medicine, but these are probably not the only elements. There is, no doubt, room for improvement in the training of the general practitioner even in relation to his traditional duties.<sup>6</sup> The new concept of general practice, however, has created a pressing need for a re-appraisal of his education and of the demands on the qualifications of his teachers. In order to achieve a high level of general practice, we must ensure the excellence of the teachers themselves by providing them with opportunities for advanced study and research commensurate with those available to their specialist colleagues. Our recommendations are, therefore, for comparable financial support once the criteria for their training have been established by the competent agencies of the profession and the medical schools.

### *The Commission recommends:*

#### **228. That the Association of Canadian Medical Colleges, in consultation with the College of General Practice of Canada and others concerned**

<sup>1</sup> *Ibid.*, p. 227.

<sup>2</sup> *Ibid.*, p. 234.

<sup>3</sup> College of General Practice, *op. cit.*, pp. 20 and 22.

<sup>4</sup> The College of Medicine, University of Saskatchewan, *op. cit.*, statement by Dr. S. A. Orchard, Appendix J, p. ii.

<sup>5</sup> *Ibid.*

<sup>6</sup> Clute, Kenneth F., *The General Practitioner*, Toronto: University of Toronto Press, 1963.



**give immediate attention to the question of setting up administrative Departments of General Practice in the teaching hospitals and subsequently, Chairs of General Practice in the Faculties of Medicine.**

- 229. That, as part of a seven-year crash programme, special Professional Training Grants of \$5,000 per year be allocated to medical graduates undertaking post-graduate study to qualify for the teaching of general practice in the Faculties of Medicine.**

### *Group Practice*

The medical group or clinic combining under one roof general practitioners and a spectrum of specialists, paramedical personnel, and laboratory and X-ray facilities, is a further development with a number of advantages to the physician and the patient.<sup>1</sup> These groups may be considered as a much needed move towards a synthesis of the medical specialties. There are many forms of partnerships and groups, all of which involve in some degree a change from independent solo practice to an organizational arrangement offering certain other advantages.

One result of these new patterns of practice is a closer association of the physician with his colleagues. This may extend to either his professional activity or the economics of his practice, or both. Closer professional association means the benefit of shared knowledge, but it also results in the acceptance of various forms and degrees of professional collaboration. This, as well as the enhanced authority of the provincial Colleges of Physicians and Surgeons<sup>2</sup> is an important step towards maintaining a high quality of physicians' services.

### *Home Care*

Having described organized home care in Volume I of this Report<sup>3</sup> as a health service that should be made available within the framework of the recommended Health Services Programmes, we wish to examine here briefly its role as an emerging pattern of health services.

Home care plans so far have not been the outcome of national, provincial, or regional planning,<sup>4</sup> but have originated locally for a variety of reasons in a number of different circumstances. Whatever their origin, however, home care plans—like medical group practice—result in the co-ordination of hitherto separate and independent services. In most cases, home care

<sup>1</sup> For more detailed discussion see Volume I, Chapters 7 and 13.

<sup>2</sup> See Volume I, Chapter 2, Recommendation 38, p. 34.

<sup>3</sup> See Volume I, Chapter 15.

<sup>4</sup> With the exception of the home care services provided by the public health nurse in British Columbia.

plans are established as alternatives to in-patient hospital care. It follows that if care outside the hospital is to be substituted, a range of services, similar to those needed by the patient if he were in the institution, must be provided. These services may well exist in the community, or could be made available, but it has been found that their mere existence has not automatically resulted in their effective use. To achieve this end, it has been necessary to establish a co-ordinating agency in the form of the organized home care plan. Once such a plan is in existence, the physician can refer patients to it very much as he refers them for admission to the hospital, indicating the services required, but without the need on his part to deal with each of the various service agencies separately.

This we regard as an important attribute of organized home care, and one which merits far greater attention than it has hitherto received. Where there is close contact between the hospital and a home care programme, we have, in fact, a model for co-ordinated health services in the community. The shortcoming of most existing plans is their limited extent. Even in cities where they exist, they are available only to a very small part of the population.

What is the impact of increased home care on the physician's time and pattern of service? We have mentioned that the physician can see a greater number of his bedridden patients more quickly and easily in the hospital than if he has to visit them at their homes. Early transfer of a patient from the hospital to home care results in a saving in terms of hospital days and costs. It usually comes at a stage in the patient's illness when he does not need daily visits from a physician but may require periodic visits by the nurse and other health workers.

In the foregoing discussion of the changing patterns of the physician's services we have referred to the changing role of the general practitioner in a world of growing specialization. The services under a home care plan require supervision by a general practitioner even though a specialist may be called in from time to time. Further study is needed to determine if an extension of the scope of home care programmes will affect the respective functions of the general practitioner or the specialist. The same applies to the greater attention given to the co-ordination of rehabilitation services reaching beyond the hospital stage and also requiring medical supervision or follow-up. These may develop new aspects of general practice which, in order to be handled effectively, must also be reflected in the education, training and role of the general practitioner.

In any community organization of health services, we assign great importance to the integration of preventive health services and such health maintenance projects as may be effectively developed. Encouragement must also be given to the various means of promoting physical and mental fitness.

*Preventive Services*

Preventive measures have been most specific and most spectacular in their success in the control of communicable diseases. We have emphasized the need for maintaining our guard in these areas and for bringing them to bear on newly emerging or newly recognized health hazards.<sup>1</sup> The effect of immunization can be seen immediately and clearly in the decline of such diseases as smallpox, diphtheria, or poliomyelitis. But there have been other means of prevention at work contributing to the general decline in mortality and the increasing life expectancy of Canadians. Among them are the environmental health measures: better sanitation, safe water supplies, gradual control of air pollution and food and drug control. Improved standards of living generally are contributing to better health even though they may give rise to certain "health hazards of plenty", such as obesity and diabetes. Not all of these measures are health services but they must not be lost sight of in the future organization of the community health services. To the extent that they are part of the functions of health agencies, they must be integrated into the proposed organization. We have discussed the risk of adverse effects from diagnostic X-rays,<sup>2</sup> but this is only one aspect of the danger from radiation which will require intensified study and control measures. The same applies to a variety of carcinogenic substances, known and still unknown, in our environment. The health of animals, for example, both wild and domestic, is a recognized environmental factor in the health of man.

Environmental health measures in the places of work contribute to physical and mental health. All this has opened a wide new field added to the traditional functions of the public health agencies. Public health facilities must be geared to their new tasks and public health positions must offer conditions comparable to other health fields if they are to attract well qualified personnel.

It should also be reiterated in this context what we have said of the individual's responsibility "to observe good health practices and to use available health services prudently".<sup>3</sup> But here again he needs the help of health agencies to determine scientifically what good health practices are. It is the task of health education—another function of the health agencies—to interpret to him these findings in a manner which he can understand and is likely to accept. Among the good health practices are personal habits, healthful recreation, maintenance of physical and mental fitness, and healthful nutrition. The activities of the Welfare Branch of the Department of National Health and Welfare under the Fitness and Amateur Sport Act<sup>4</sup>

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<sup>1</sup> See Volume I, Chapter 5, pp. 166 and 167.

<sup>2</sup> See Chapter 3, pp. 82-84.

<sup>3</sup> See Volume I, Chapter 1, p. 12.

<sup>4</sup> C-131, Fourth Session, Twenty-Fourth Parliament, 9-10, Elizabeth II, 1960-61.



are intended to provide Canadians with the knowledge and opportunity of activities to promote fitness.

Nutrition is another area of the individual's responsibility for his and his family's health where the responsibility can be exercised only on the basis of authoritative information provided by the health agencies responsible for scientific research in this area. Together with sanitation and adequate housing, improved nutrition has no doubt played a major part in achieving the high standard of health Canadians enjoy today. Still problems continue to persist. One is overweight and its adverse consequences on the health of many Canadians. The other relates to the substandard diets on which many people in Canada still live. Hence, the role of nutrition in the framework of the future health services can hardly be overemphasized.<sup>1</sup> Yet little is known on a consistent and continuing basis of the nutritional status of Canadians. Proper nutrition, however, is not merely a matter of quantity but also of the right kind of food consumed.<sup>2</sup> Together with fitness programmes, nutrition services may play an important part in the prevention or alleviation of chronic diseases.

While the prevention of some diseases has to await a breakthrough in medical research, we have now the knowledge necessary to prevent most accidents. We have discussed in Chapter 6 the role of voluntary agencies in this field, stressing particularly the need for the reduction of traffic accidents, but accidents in the home and in industry, on the farm, and in recreation also remain major health problems. Prevention is partly a matter of publicly provided or enforced safety devices, but very largely it remains a matter of personal responsibility. Full awareness and exercise of this responsibility, supported by knowledge through education, can greatly reduce the toll in life and health.

Knowledge about these matters will reach families and individuals through the many channels of health education. The general practitioner in his new role will have a major part to play in this, whether in the context of his private practice or in some form of health maintenance clinics.<sup>3</sup> The periodic examinations we have recommended<sup>4</sup> are intended to provide physicians, dentists and patients with an opportunity for preventive measures

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<sup>1</sup> Stare, F. J., "Why the Science of Nutrition?", *Nutrition Review*, Volume 8, No. 1, January 1950, p. 4. "... Where we have such wonder drugs as penicillin and aureomycin to combat the ordinary infectious diseases such as pneumonia, nutrition stands as the single most important factor affecting our personal well-being. . ."

<sup>2</sup> Subcommittee on Control of Nutritional Diseases, *Control of Malnutrition in Man*, American Public Health Association, New York, 1960, p. 1. "Lack of dietary information, misinformation, fads, and food taboos can and do produce malnutrition in the midst of wealth and plenty."

<sup>3</sup> Roth, F. B., *Statement on Health Education*, prepared for the Institute on Community Education for Health, Saskatoon-Regina, 1961. "Those who accept responsibility for providing health care must provide the necessary leadership to develop the widest possible understanding of the complex nature of the health needs and services."

<sup>4</sup> See Volume I, Chapter 2, Recommendation 30(h)(ii), p. 32.

of the kind we have discussed, and the immunizations recommended as part of the Medical Services Benefit<sup>1</sup> will ensure that this form of protection against communicable diseases is maintained.

### *Rehabilitation*

In Volume I of our Report we have dealt with rehabilitation largely as a health service, i.e., rehabilitation in the sense of medical restoration. We have referred there to personnel and facilities required and also to the strong rehabilitation component in home care programmes.

In this chapter we are chiefly concerned with the manner in which a rehabilitation service stimulates the co-ordination of the whole range of services required to restore the once disabled to their fullest possible role in the family and the community. This goes beyond the scope of health services proper and, depending on the case, may involve also the services of education, welfare, training, job placement, and other community services directed towards the social and economic as well as the medical aspects of the patient's illness. During the stage of medical restoration the new emphasis on the rehabilitation of the patient means new patterns of service. We see rehabilitation or physical medicine wings being established in general hospitals; an increasing number of therapists employed in general, mental, and tuberculosis hospitals; the emergence of the rehabilitation centre with its in- and out-patient facilities; and the development of rehabilitation and follow-up facilities and services in the community outside the hospital. In many communities facilities for the rehabilitation of the physically disabled have developed over the recent years. More recent is the development of corresponding services for the psychiatric disorders in an attempt to remove as many cases as possible from the traditional large mental hospital and also to reduce the necessity of hospitalization of the mentally ill in the psychiatric wards of the general hospitals.

These local services and home care plans for the mentally ill, like all mental health services, are still largely subject to the traditional separation from general health services, a separation extending also to some home care plans. The acceptance of our Recommendations regarding the integration of mental and tuberculosis services with the general health services<sup>2</sup> will remove this anomaly but the emphasis on community care for the mentally ill and the retarded, including their fullest possible rehabilitation, will considerably add to the demand for services outside the hospital, a demand which needs quantitative evaluation if we are to have a sufficient supply of personnel and facilities. One major obstacle in the path of such an assessment is our lack

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<sup>1</sup> See Volume I, Chapter 2, Recommendation 30(h)(i), p. 32.

<sup>2</sup> See Volume I, Chapter 2, Recommendations 29 and 108, pp. 31 and 56.

of knowledge regarding the reservoir of patients needing rehabilitation services, physical as well as mental, which is one of the most important tasks for the health statistical agencies.

Rehabilitation, however, does not stop once medical science has done all it can for the patient. Nor must we lose sight of the fact that where prosthetic devices and aids are needed medical science is greatly supported by the latest achievements in the physical sciences and that modern engineering contributes greatly to the design and effectiveness of such devices; examples of this are the extraneous power-operated prostheses which have been developed, particularly for children with congenital abnormalities.

The intricacy and complexity of modern prosthetic aids make increasing demands on the personnel and facilities providing these services. To ensure, therefore, a high quality of service, it will be of the utmost importance to maintain appropriate standards in the training of prosthetists and orthotists, as well as in the equipment used and the facilities for its manufacture and fittings.<sup>1</sup>

Medical rehabilitation services at all levels must be geared to meet the demands of intensified rehabilitation services and they must have the resources to meet these demands and, in particular, to ensure the necessary liaison and co-ordination with all agencies involved in this complex service.

Health services are becoming increasingly interrelated with and often dependent on other community services. One of the basic components of home care plans, for instance, is a homemaker service. Other social services such as the provision of meals may be required. In this case health and social services work hand in hand. The chain of rehabilitation services, on the other hand, often means a gradual fading out of the health services proper to give way to welfare services (e.g., sheltered employment), education and training services, placement services, and various forms of follow-up services with or without medical supervision. Many of these services offer excellent opportunities for voluntary action by groups organized to provide certain types of services.<sup>2</sup>

This concept of a spectrum of services indicates the need for the effective co-ordination of all services bearing on rehabilitation, introducing a new dimension into our discussion of the co-ordination of services. Modern principles of rehabilitation require the closely co-ordinated interaction of a variety of health services, usually under different auspices. This may include

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<sup>1</sup> See Volume I, Chapter 2, Recommendation 115, p. 60. In view of the contributions by modern engineering techniques to the design of prosthetic aids, we have in Volume I recommended "That funds be made available through the Health Sciences Research Council for research and experimentation into the creation and distribution of prosthetic devices, the development of effective techniques; and by Professional Training Grants for the training of the necessary technical personnel".

<sup>2</sup> See Chapter 6.



institutions of different types and services outside institutions which, as already pointed out, require close co-ordination with organized home care programmes.

Many of these principles are recognized in the Vocational Rehabilitation and Disabled Persons Act of 1961. The Act provides for federal contributions to the provinces amounting to half the cost of comprehensive programmes for the vocational rehabilitation of disabled persons. Under the Act, federal activities are co-ordinated and, correspondingly, co-ordinators of rehabilitation services in the provinces have been appointed. The department responsible for carrying out the provisions of the Act at the federal level is the Department of Labour.

It is indeed to the credit of all agencies concerned with the implementation of the Act that in the short time since its passage, an effective and impressive organization has been built up. The Act has, however, one serious shortcoming namely the restriction of its provision to *vocational* rehabilitation aimed primarily at the potentially gainfully employed.

This restriction excludes the large number of disabled persons who, because of age or the degree of their disability, cannot hope "to become capable of pursuing regularly a substantially gainful occupation" but who may nevertheless profit from rehabilitation services to the extent of greater independence from the help of others. They may be able to live in the community instead of in an institution or they may be able to dispense with somebody looking after them. This means returns in happiness and satisfaction as well as economic benefits. Until all those who can profit from rehabilitation services are covered by one co-ordinated system, the co-ordination is not complete thus seriously reducing the effectiveness of the programme. Difficulties exist not only for cases obviously excluded from the provisions of the Act but also for the numerous borderline cases where much time and effort is wasted in determining under which department's jurisdiction the case may come.

We are aware that the Act is broadly interpreted and that home-making, for instance, is specifically accepted in the agreements with the provinces as a "substantially gainful occupation", but the Act remains restricted to a concept of gainful employment. This restriction may have had some justification originally. The interest in rehabilitation shifted after World War II from the Armed Services to those employed in industry,<sup>1</sup> but it has now broadened into a concern for the disabled regardless of their vocational status.

We note that the National Advisory Council on the Rehabilitation of Disabled Persons at its third meeting in May 1964 unanimously passed a motion requesting the Department of Labour to re-interpret the term "disability" with a view to including all those socially handicapped where a

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<sup>1</sup> See the activities of the Workmen's Compensation Boards.

reasonable expectation of vocational rehabilitation exists.<sup>1</sup> In our view the provisions of the Act should apply to all disabled persons who may profit from any of the services provided under the Act, regardless of their vocational potentialities. It should be noted that the agreements with the provinces under the Act specify the services provided under the Act which go beyond vocational rehabilitation proper.<sup>2</sup>

The Report of The Royal Commission on Government Organization (Glassco Report) recommended in regard to the medical aspects of rehabilitation that these be co-ordinated by the Department of National Health and Welfare.<sup>3</sup> In its final volume, the Glassco Commission recommended that the Civilian Rehabilitation Branch of the Department of Labour be moved to the Welfare Branch of the Department of National Health and Welfare.<sup>4</sup>

Having recommended the separation of the administration of health and welfare into two departments at the federal level, we face the question of what should become of the Civilian Rehabilitation Branch. By recommending the broadening of the Act, we make it clear that we would like to see all rehabilitation resulting from health defects co-ordinated by one agency without limiting it to certain population groups (such as the employable) or to certain types of health defects (such as either physical or psychiatric). We are equally anxious to ensure that the administering agency cover all services—health, welfare, education, employment—which can possibly aid the impaired. This is basically a matter of legislation as well as of the spirit, knowledge and intentions of those called upon to administer it, no matter what department of government they are administratively associated with.

As long as the aforementioned requirements are met, it matters less which department is responsible for co-ordinating rehabilitation services, but in view of existing problems we conclude that the most satisfactory solution would be an independent agency<sup>5</sup> on which the various departmental interests are represented, under a chairman to be appointed because of his personal qualifications rather than his affiliation with a particular department.

Whatever the structure of this agency, it should be responsible for rehabilitation services of all kinds for all types of health problems, including

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<sup>1</sup> Minutes of the Third Meeting of the National Advisory Council on the Rehabilitation of Disabled Persons, Department of Labour, Ottawa, 1964, p. 13.

<sup>2</sup> Section 4 . . . "(b) services and processes of restoration, training and employment placement designed to enable a disabled person to dispense with the necessity for institutional care or the necessity for the regular home service of an attendant;

"(c) providing for utilizing the services of voluntary organizations that are carrying on activities in the Province in the field of vocational rehabilitation of disabled persons."

<sup>3</sup> The Royal Commission on Government Organization, *Services for the Public*, Vol. 3, Ottawa: Queen's Printer, 1962, p. 212.

<sup>4</sup> *Ibid.*, *The Organization of the Government of Canada*, Vol. 5, Ottawa: Queen's Printer, 1963, pp. 89-90.

<sup>5</sup> Established similarly to the Canadian Pension Commission or other Commissions or Boards of the Federal Government.

psychiatric disorders and mental retardation. The corresponding organization at the provincial and local level may follow similar patterns, integrated with the organization of health services outlined in this and the previous chapter.

*The Commission recommends:*

230. That the Vocational Rehabilitation of Disabled Persons Act, 1961, be amended by removal of its restriction to *vocational* rehabilitation and that the terms "disabled person" and "vocational rehabilitation" be revised and redefined accordingly.
231. That a new rehabilitation agency of the Federal Government be established, with representation from the Federal Department of Health, the Department of Welfare, the Department of Labour, the Department of Veterans Affairs, and the Unemployment Insurance Commission reporting to Parliament through the Minister of Labour.
232. That the National Advisory Council on the Rehabilitation of Disabled Persons, with representation from the federal departments concerned, provincial governments, voluntary agencies, medical professions, universities, and employer and employee organizations, act in advisory capacity to the new rehabilitation agency.

## CO-ORDINATION AND HEALTH SERVICES ADMINISTRATION

We support the pattern of a multiplicity of health services found in many of our communities today but we recognize that a deliberate effort at co-ordination is needed in order to make such services as effective as possible.

The appointment of this Royal Commission provided for the first time an opportunity for a review by one agency of all aspects of all health services in Canada. In our Report we make it quite clear that we cannot offer solutions to all problems nor will all the solutions which we recommend be applicable indefinitely. On many occasions we emphasize that we can only establish benchmarks which, because of the many dynamic factors in the health field, will need continuing study to bring our observations up to date and to adjust them in the light of changing trends. We have, however, come to the conclusion that in order to make the best possible health services available to all Canadians we must abandon the haphazard and piecemeal approach of the past.

The recommended provincial Health Services Programmes, once fully implemented, are each an indivisible entity. This is reflected in the recommendations for the integrated planning and direction of all health services.



As we have indicated, at the local level the auspices under which the many health services operate are shared among free self-governing professions, voluntary private and semi-public agencies, and local governments.

What we wish to present is a broad outline of possible forms that co-ordination can take but which can be adapted with due allowances made for regional variations and established institutional and professional working relationships.

To set as an objective the co-operation of a variety of agencies is difficult but by no means unrealistic. Voluntary health organizations have been co-ordinating their efforts to an increasing extent. If, so far, these have been sporadic efforts, they illustrate the need as well as the readiness of the agencies concerned for greater co-ordination and co-operation. There is no reason to assume that co-ordination would not be effective on the larger scale which has become necessary. It must work if we are to retain the present basic structure and yet have effective health services.

Although it is vital for good health care that services be co-ordinated in view of the varied conditions and patterns for providing health services in the provinces, it is not possible or desirable to specify in detail how such co-ordination should be carried out. What the patient and the physician need are the ancillary services that make medical care outside the hospital setting effective. What is vital is that such ancillary services are made available and that the information as to how they can be obtained is made known to physicians and others who require them. This type of development already exists in a number of home care and rehabilitation programmes although these are limited to a relatively few areas.<sup>1</sup> What is required is that it be extended to all areas of Canada and that physicians, hospitals, public health authorities and voluntary agencies everywhere participate in the development of co-ordinated programmes. The physician benefits in that he would have ready access to a wider variety of ancillary services for out-of-hospital patients than he otherwise could obtain. The patient benefits from access to services that enable him to regain health. The community benefits from the more effective use of scarce resources, both physical and human.

While we have neither specified who should be responsible for organizing out-of-hospital programmes nor stated who should be responsible for the provision of information about the services available to patients and physicians, we envisage two organizations as sharing the responsibility for seeing that the job is done; these are the provincial Health Services Commissions and Health Planning Councils.

The Regional Health Services Co-ordinator, acting on behalf of the provincial Health Services Commission, is crucially placed to ascertain the gaps in the needs of the community and where co-ordination is required.

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<sup>1</sup> See Volume I, Chapter 2, Recommendations 116 to 123, pp. 61 and 62.

The regional or local Health Planning Council similarly will be aware of the needs and wishes of health professionals, local governments and voluntary agencies and will be in a position to formulate plans and make recommendations relating to the manner in which co-ordination should be achieved. Together, they may recommend that the co-ordination be the responsibility of the regional or local public health authorities, a particular voluntary agency, a major hospital, or another organization, but they must ensure that the task is done.<sup>1</sup> The leadership and the planning, however, would come from the community through the participation of all interested parties in the making of decisions.<sup>2</sup> The physician, and through the physician the patient, would have access to those services without which good health care out of hospital cannot be achieved.

This means the emergence of a new type of health personnel, namely the health services administrator. The qualifications required for this role will depend largely on the scope of the task the individual is expected to perform. In many of the existing home care programmes the co-ordinator or administrator comes from the visiting nursing service because of familiarity with other community services, with general conditions in the community, and with the particular problems of home care patients. This has worked out very satisfactorily. For administering the more complex systems for large populations, however, formal training in the administration of health services will be required. While small communities may be well served by a person who has been working in the field and gained experience, the knowledge and ability necessary in more complex situations can be better acquired by the formal training—undergraduate and post-graduate—increasingly made available at universities.

*The Commission recommends:*

- 233. That the Health Professions University Grant be available for the establishment of undergraduate and post-graduate courses in health services administration at selected Canadian universities.**
- 234. That, as part of a seven-year crash programme, special Professional Training Grants of \$3,500 per year be made available to graduate students proceeding to a higher degree in such courses.**

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<sup>1</sup> The Health Services Regional Co-ordinator might well be the secretary of the regional or municipal Health Planning Council.

<sup>2</sup> In planning health services for the aged the Canadian Medical Association suggests that "The leadership and responsibility for planning programs for the aged should emanate from the community through meetings of all interested agencies including the medical profession. A central committee representing various interested groups is possibly the best method of establishing community programs. The Provincial Government should be represented on these committees as it is in a position to stimulate action for the development of facilities and to provide financial assistance where necessary." Canadian Medical Association, *Health and Institutional Care Aspects of Aging*, a submission to the Senate Committee on Aging, Ottawa, November 5, 1964.

### *Regional or Municipal Organization*

Two points emerge from the foregoing discussion: (1) the proposed co-ordinating organization should evolve from already existing or emerging patterns through the systematic application of tried and accepted forms of organization rather than the imposition of a new administrative machinery; and (2) the basic model should be adapted to local conditions and requirements taking into account the existing basic administrative organizations. Flexibility will be the watchword.

It follows that the area to be considered as a community or region for the purposes of the health services organization cannot be uniformly defined and delineated. It may consist of an existing metropolitan area, health unit or region, a region identified as such for purposes of hospital planning, groups of municipalities or counties, or an area whose boundaries have been determined by a study of utilization patterns.

The implementation of the programme will result in two agencies at the regional or municipal level: (1) the regional and/or municipal Department of Health, and (2) the regional and/or municipal Health Planning Council.

The regional and/or municipal Department of Health will provide the organizational basis for home care and rehabilitation programmes if these are not provided elsewhere. It will maintain liaison with the provincial Department of Health, the provincial Health Planning Council and with other organizations concerned with the provision and organization of services associated with rehabilitation and home care. It will co-operate with the Health Services Regional Co-ordinator and the regional and/or municipal Health Planning Councils in the planning for health services for the benefit of the physician and the patient.

The regional and/or municipal Health Planning Council will make recommendations to the provincial Health Planning Council for programme development and the improvement of health services in the local or regional area. It will also make recommendations regarding the regional needs for personnel, facilities and organization, and the activities of voluntary and government health organizations. It will appoint an executive secretary to work with the health officers of regional and local health departments and the Health Services Regional Co-ordinator in the establishment of regional or local health plans.

It is inherent in the principles laid down in the Health Charter for Canadians, and in our concept of the proposed organizations and councils that the fact of their establishment alone will not alter the existing distribution of functions and responsibilities between the professions, voluntary organizations, and governments. Nor should they necessarily serve to maintain the *status quo*. As in the past, any changes in the present role of the



respective agencies will come about as the result of the continuing evolution in our health services and social institutions. The only difference will be that the haphazard, sometimes inadequate and sometimes wasteful development of the past will be replaced by a careful assessment of current and future needs, followed by appropriately planned expansion of the services required.

## CONCLUSION

Volume I of our Report dealt with the basic concept of the recommended Health Services Programmes, their financial structure, and questions concerning the resources necessary for the orderly development of their component parts. In the previous chapter, we discussed the administrative implications at the federal and provincial levels, which would ensure that the various programmes develop into the comprehensive system that alone can bring to all Canadians the best possible health care. In the subsequent chapter, we will discuss the special problems of health services in the sparsely settled areas of our country, particularly the northland. In this chapter, we have dealt with the problem of how to co-ordinate into an effective whole the multiple services now existing in many of our communities and how to develop the best possible services under varying circumstances applicable to different areas and localities.

Where there is a multiplicity of services and agencies, there is a need for co-ordination. Tracing the development of Canada's health services, it becomes clear that the present situation is the result of the growing fragmentation of the vast body of scientific knowledge as well as of the social and political patterns. These factors together with changing health problems brought about new services, new disciplines and a transformation in such basic components of the health services as medical practice and hospital services. In this situation, the need for some form of synthesis of the proliferated component parts has been felt for some time by those who have to work with them. As a result new patterns have developed here and there, such as medical group practice, organized home care services, and co-ordinated rehabilitation services, all of which carry some of the seeds of co-ordination. The basic features of co-ordinated community services are there and all that is needed is their systematic application and encouragement instead of letting each community grope for a solution of its own problems without the benefit of the experience already available elsewhere.

Together with an appreciation of the need for co-ordination, there has developed a growing awareness of the necessity for broader planning beyond the scope and needs of an individual institution or even community. Regional hospital planning, as we have pointed out, has become accepted

as the only logical way by which to provide hospital services of high quality, and provide them efficiently.

Though the pattern of medical practice has been undergoing great changes, the physician nevertheless remains the pivotal point of the various types of health services now available. In a world of specialists, it has become imperative to review and redefine the role of the general practitioner. The details of such a re-assessment of the respective functions of medical practitioners, as well as of the education preparing them for their role, must be left to the proper academic and professional agencies, but there is, no doubt, an urgent need for action in this field.

In recommending health planning councils and outlining the roles of the health services regional co-ordinators and health services agencies, we have developed models which we consider to be workable and effective in typical situations. Their exact composition and scope, jurisdictional and geographical, however, must be flexible and will vary with local needs and resources. There are bound to be differences between the outposts of Newfoundland and the outlying communities of the Prairie Provinces, or between the large metropolitan centres and the vast empty spaces of the North.

A multiplicity of agencies and auspices in local health services is part of Canada's social and constitutional fabric. Variety, in a country as vast and heterogeneous as ours, is not only necessary but also beneficial because of the varied experiences to be gained, and the assessment of the best results achieved with given resources and individual and community initiative. But it can be advantageous to Canadians only to the extent that it results from carefully examined needs and thorough planning in all its ramifications and implications. This is what the proposed organization is intended to accomplish for the benefit of all Canadians in every part of this country.





## Health Services in the North

### THE MEANING OF THE NORTH

"Returning to the thin southern strip of Canada where most of us live, we are sadly aware of the fact that our country cannot achieve its full destiny as long as its unique but distant parts remain unknown and undeveloped."

These are the words of a traveller to the North on his return. The distinguished traveller was Canada's Governor General, General Georges Vanier.<sup>1</sup> His predecessor, Vincent Massey, the first Governor General ever to visit the North and also a great Canadian, came back from that historic visit with this observation:

"Like every other part of this great country, at first sight mysterious and even forbidding, it is now revealing itself as a land where it needs only energy, determination and ingenuity to build large and thriving communities."<sup>2</sup>

It is perhaps because few Canadians have shared the experience of travelling in those remote parts, that they have only reluctantly, patronizingly and in a very detached fashion accepted the North as part of their country and the native people as their fellow citizens.

Canadians must accept the North: it is part of their country, for better or for worse, but all the evidence is that it will be for the better. Should Canadians accept it grudgingly as a liability, or does the northland hold some promise that, besides just being there, it will some day return the investment and contribute to Canada's progress and wealth?

A Prime Minister has answered that question with a challenging and emphatic yes:

"Canada's northland is a vast safety deposit box of minerals that represent the title-deeds to freedom's survival. The great northland is no

<sup>1</sup> Vanier, The Right Honourable Georges, in Foreword to *The Unbelievable Land*, ed. Smith, I. N., Ottawa: Queen's Printer, 1964, p. vii.

<sup>2</sup> Massey, The Right Honourable Vincent, *Speaking of Canada*, Toronto: The Macmillan Company of Canada Ltd., 1959, p. 14.

longer a forbidding waste . . . As the world enters an age in which science will dwarf the achievements of the past, the northern storehouse of Canada must be rendered accessible and available."<sup>1</sup>

In many ways, the North has already contributed. It has provided a vast proving ground for scientists; it contains strategic defence positions; it has enriched the arts by the work of the artists living there as well as by inspiring those coming from the South to seek its mysteries. Apart from these abstract though no less real values, the North, step by step, has been yielding returns to the far-sighted businessman and those who have studied and know the northland are far from seeing it as a sterile appendage only to the productive southern part of the country. It has been stated in fact:

"There are, it is true, some millions of acres of arable land in the Yukon and the Mackenzie Valley and, while it may come as a surprise to many, on much of that land crops of grain and vegetables can and undoubtedly will be successfully grown. There are also extensive areas of commercially valuable forest far, far north of any regions that we have thought about in the past as being important sources of timber and timber products. These are even now beginning to be used, and most of them will probably one day have value. There are also commercial fisheries, some in existence, others that can be developed, which will be worth several millions of dollars each year. However, when all these surface resources have been developed to their fullest degree—as developed they almost certainly will be—they will still be far over-shadowed by the growth that will be based on the resources that lie below the surface. The main economic possibilities of the Yukon and of the Northwest Territories lie in the domain of minerals".<sup>2</sup>

Exploration of these resources has been greatly facilitated by the airplane which provided the chief means of opening up the North. Telecommunication is following and gains are consolidated cautiously on the ground here and there by roads and railways pushing farther north.

Canada officially assumed the title and ownership of all British possessions to the north of what was then Canada by Imperial Order in Council of 1880. For such title and possession to be recognized internationally, however, neither discovery, nor propinquity, nor any unilateral proclamation suffice. "To receive international recognition possession demands the acceptance of two responsibilities, continuing interest in the territory, and a concern for the welfare of its inhabitants."<sup>3</sup> There should be no doubt that both conditions are met in regard to Canada's North.

But the area discussed in this chapter is by no means clearly defined nor is it homogenous. Because health services are part of the administrative organization, the line is conveniently drawn between the provinces generally

<sup>1</sup> Diefenbaker, The Right Honourable John G., address delivered before the Toronto Board of Trade, February 4, 1957.

<sup>2</sup> Jenness, D., *Eskimo Administration: II, Canada*, The Arctic Institute of North America, Technical Paper No. 14, 1964, p. 17.

<sup>3</sup> Robertson, R. G., "The Long Gaze" in *The Unbelievable Land*, ed. Smith, I. N., Ottawa: Queen's Printer, 1964, p. 133.

to the South, and the Yukon and the Northwest Territories to the North. Geographic factors, however, do not exactly coincide with administrative and jurisdictional boundaries. If this chapter is devoted to the sparsely populated areas of the North, it must be understood that some of our remarks will be applicable also to certain northern areas in the provinces.

Nor are the Territories themselves homogenous in regard to their health needs and resources: the Yukon, for instance, is approaching more closely provincial patterns and, as railroads and roads open up new areas in the Northwest Territories, some communities there have begun to develop similarly to their southerly counterparts. The Mackenzie District is being settled and becoming accessible faster than the remaining part of the Northwest Territories, while elsewhere in the Territories we still encounter small nomadic population groups as well as permanent settlements. Some of these have a sound economic basis, others have come about just by people gathering from surrounding areas, still waiting to bridge the gap between the traditional life and the new. Because of this variety of conditions and circumstances, our observations are bound to contain generalizations which may not, or not to the same degree, be applicable to all parts of the North.

The main problems, however, are common, though in varying degrees, to the entire area. They are: small populations widely scattered over a large territory, harsh climate, lack of communications and transportation, lagging social and community services, all closely related to problems of economic development in this area.

To grasp fully the problems and the challenge of the North, one has to wing over hundreds and hundreds of miles looking down on nothing but barren tundra with no sign whatever of human habitation and no trace of human activity. Statistics alone cannot quite convey this impression but the figures of population density serve as a good illustration. In 1964,<sup>1</sup> the population density was as follows:

Yukon .....	0.08	people	per	square	mile <sup>2</sup>
Northwest Territories .....	0.02	"	"	"	"
Rest of Canada .....	8.3	"	"	"	"

Thus, the population density in the Yukon is about one-hundredth, that in the Northwest Territories about one-four-hundredth, of that in the area covered by the provinces. Looking at it the other way, there are over 50 square miles of area per person in the Northwest Territories, about 13 in the Yukon, and only about one-tenth (0.12) of a square mile per person in the rest of Canada, and even this is only thinly populated in comparison with other parts of the world.

<sup>1</sup> Based on population estimates as of October 1, 1964.

<sup>2</sup> Including land and fresh water area because the latter also has a bearing on distances and communications.



While cities like Toronto or Vancouver are usually frost-free from early in April or May until October or early November,<sup>1</sup> some parts of the Arctic have no appreciable period free from frost and others have only a brief period of six or eight weeks.<sup>2</sup>

These circumstances, together with the absence of the means of ground transportation on roads and rails, which are familiar in the South, clearly indicate that the planning of any community services in the North must be based on considerations essentially different from those that apply in the rest of Canada. It is for this reason that we review the health services in the North separately from those with which we have dealt in most of the preceding parts of our Report.

The North presents a particular problem and the necessary action must be geared to this particular need. In the settled areas of Canada our concern has mainly been with ensuring that all have access to services which already exist and which are to be developed in accordance with our recommendations: but, basically, the services are there and the need is for their development, organization, and financing. The problem of the North, however, is the bringing into existence a viable system of health services.

The programmes we have discussed and the recommendations we have made in the preceding parts of our Report deal with the health services in the provinces, an area containing 99.8 per cent of Canada's population. But there remains an area comprising four-tenths of the total area of Canada, about 1½ million square miles, lying outside the provinces. There are about 40,000 people in this area—about one-fifth of one per cent of Canada's population. This numerically small group, the population of the Northwest Territories and the Yukon, is characterized, however, by circumstances vastly different from those encountered in the provinces.

Health services for those people and the area they inhabit must become part and parcel of Canada's future health services. Our task is completed only when we have recommended such measures as we believe will ensure that the best possible health care is available to *all* Canadians. Accordingly, the Health Charter for Canadians<sup>3</sup> provides for a universal programme, which means that "adequate health services shall be available to all Canadians wherever they reside and whatever their financial resources may be."

We had to accept the fact that in a country as wide and varied as Canada, the nature of services provided will have to vary between regions and that the meanings of what constitutes "the best possible health care"

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<sup>1</sup> Victoria from the end of February until early December.

<sup>2</sup> Dominion Bureau of Statistics, *op. cit.*, pp. 53-55.

<sup>3</sup> See Volume I, Chapter 1, p. 11.

will have to be interpreted in the light of prevailing conditions. We have, therefore, recognized that geographic factors will impose certain limitations.<sup>1</sup>

We recognize that such limitations exist even within the provinces and also that general living conditions vary. We have, therefore, emphasized the need for flexibility in the proposed organization of health services and its adaptation to regional and local needs. We are also aware that poverty and slowness of community development are not limited to the North. It is in the Territories, however, that these phenomena, compounded by the harsh climate, largely determine the general needs of wide areas, thus demanding a special approach on a large scale rather than remedial action in certain limited local areas.

## HEALTH PROBLEMS

In discussing in Volume I the particular health problems of the North, we have referred to the inhuman living conditions we found in some settlements.<sup>2</sup> Those conditions are not common to all parts of the Territories but they are sufficiently widespread to cause alarm and demand quick and determined action. The contrast between the primitive conditions of those vegetating in tents and snowhouses with those of officials living in houses providing most of the comforts we know in the South, only serves to accentuate the plight of the former group. We must assume that Canadians have been only dimly aware of these circumstances, which would not be tolerated anywhere else. Even in the more bearable climate of the South, no one would be allowed to even spend one night, let alone a whole winter, or a lifetime under such degrading conditions.

That these conditions are still fairly general and not isolated instances, can be deduced from the health indicators which reflect the social rather than the medical problems. We have demonstrated this<sup>3</sup> by presenting certain vital statistics, and particularly referring to the distressingly high rate of infant mortality, that is, of children in their first year.<sup>4</sup> The danger does not end when the children reach their first birthday; on the contrary, while infant mortality in the Northwest Territories is about four times as high as in Canada as a whole, mortality among children aged 1 to 4 is about eight times as high.<sup>5</sup>

These are health problems created by the conditions under which a substantial part of the population live. It should be noted that the figures

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<sup>1</sup> *Ibid.*

<sup>2</sup> *Ibid.*, Chapter 5, p. 224.

<sup>3</sup> *Ibid.*, p. 223.

<sup>4</sup> *Ibid.*, p. 154.

<sup>5</sup> The rate for the Northwest Territories in 1963 was 8.2 compared with the Canadian rate of 1.1 (data supplied by the Dominion Bureau of Statistics).

quoted are already the result of some improvement during recent years. Both the age-adjusted death rate and the infant mortality rate have been declining as shown for the Northwest Territories:<sup>1</sup>

	1959	1960	1961	1962	1963
Age-adjusted death rate.....	14.8	14.9	14.6	13.2	11.9
Infant mortality rate.....	129.3	144.4	111.0	119.9	104.2

However, the wide spread still existing between the rates in the Territories and the Canadian rates indicates that these health problems cannot be resolved without a substantial amelioration of general living conditions.

But the health problems created by poor living standards are not the only ones peculiar to the North. There are, in addition, the problems arising out of the need for adjustment to new conditions. Those native to the North have to change traditional ways to adjust to new patterns, while those coming from the South have to adapt to the climatic and social environment of the North.

Common to both groups, and to all residents of the North, whether they be there permanently or only for a short duration, is the problem of obtaining adequate service in emergencies. Such emergencies may affect an entire community, in the case of an epidemic for instance, or the individual and his family as in the case of sudden illness or serious accident. The possibility of something like that happening may, in fact, deter people from accepting assignments in the North. One needs to think only of being there with a persistent toothache without ready access to a dentist.

These exigencies, of course, will not be eliminated for some time to come even with the most adequate services, and they will continue to be a case of the limitations imposed by geographic factors referred to earlier. But these risks can be substantially reduced by the implementation of our recommendations.

## HEALTH SERVICES NEEDED

To meet the health needs of the North, it is necessary first to secure the required personnel, equipment and facilities; and second, to make these resources physically available when and where they are needed.

Visiting the health installations in the North one cannot help being impressed by the high calibre of the personnel and their inspiring sense of

<sup>1</sup> Dominion Bureau of Statistics, Annual Reports of Vital Statistics, Ottawa: Queen's Printer.



service. The problem is that there are not enough and that those who are there do not get enough inducement to stay for a reasonable length of time.

Even from the very brief and sketchy picture we have given here, it will be obvious that certainly for many years to come we cannot expect patterns of professional practice as they prevail in the South of Canada to be established in the North. Private professional practice, for instance, will remain the exception rather than the rule, limited to a few larger and economically well established settlements.

The type, size and distribution of institutional facilities will have to be based on criteria peculiar to the needs of the region. While in the well organized parts of the country the hospitals, health centres, and other facilities can be built without much difficulty, wherever indicated by planning in terms of the population served, the North imposes considerations of logistics concerning both the erection and operation of these facilities. The regional planning we have recommended for the Health Services Programmes in the provinces, assumes a different dimension the farther north one moves from the few-hundred miles wide belt where most of Canada's population is concentrated. The location of the bases for health services must be selected from only a very limited number of suitable sites, whereby one always has to reckon with the possibility that the suitability of a certain centre may change at short notice with changing population patterns. The greater dependency of northern health services on the means of transportation and communication also will make them more subject to obsolescence due to technical advances in these fields. Obsolescence, however, is not confined to health facilities: our society has accepted paying a high price for it; when a faster airplane appears on the market, a whole fleet of old but serviceable ones may be discarded. While only one or two decades ago Canadians pointed with pride to the many small communities that could boast their own small hospital, and while these hospitals served a real need at the time, many are no longer necessary nor desirable today. In planning for the North, we must accept the risk of perhaps faster obsolescence of some of the equipment and facilities. This stresses the need not only for careful planning but for speedy implementation of plans so that the most effective use can be made of health resources.

Although the principles and objectives we have formulated for the recommended Health Services Programmes should also be made the ultimate aim in the North and the programmes should be extended into areas where the general community development warrants it, for a vast area the northern health services must have regard to:

- (a) the problems of distance, climate, small and scattered populations and the difficulties of transportation and communication;
- (b) the difficulty in attracting and retaining in the service qualified personnel willing to serve in the North.

With the exception of the few areas in the Yukon and the western part of the Northwest Territories where urban centres have developed, conditions of the North generally have the following results: they preclude the methods of private professional practice; they require different standards of design and bed-population ratios for hospitals; different criteria for an adequate establishment of personnel; and also different types of personnel such as the midwife and the lay dispenser.

To overcome these problems constitutes a formidable task. They must be faced, however, because the situation in the North cries out for a solution. The problems have been studied for many years by eminent experts in the numerous fields of anthropology, sociology, medicine, engineering, economics, education and many others. Solutions are being attempted here and there, and possibly could succeed some day on a broad scale—if we are content to wait until new generations of the people achieve higher standards of education, until sound economic development covers the arctic regions, and until gradually, step by step, community services are established. But can and should we wait that long? Our answer is: We must plan now and act as soon as possible.

We have described the basic problem as one of supplying the necessary resources and then of bringing them within the reach of those who need them.

The Northern Health Service of the Department of National Health and Welfare is the agency responsible for the health services in the Territories, comparable in some respects—but not all—to a provincial health department. The Northern Health Service has prepared five-year plans for the development of health services in the Yukon and the Northwest Territories respectively, for the period 1962 to 1967.<sup>1</sup> These plans are being implemented and they should receive all necessary support. The Service must also be given the resources necessary for the continued planning, periodic review and adaptation of existing plans to new situations, and the implementation of these plans. The principles of regional planning for the strategic location of more elaborate installations such as hospitals will have to be observed whereby the criteria such as bed-population ratios will have to be adjusted to the needs of sparsely populated areas covering great distances.

### *Organized Flying Health Service Circuits*

In a document<sup>2</sup> prepared at the request of this Commission, the Northern Health Service outlined an imaginative plan for organized flying health service circuits. It would bring regular visits several times a year, by health personnel to the scattered communities of the Yukon and the Northwest Territories. The following map shows these circuits:

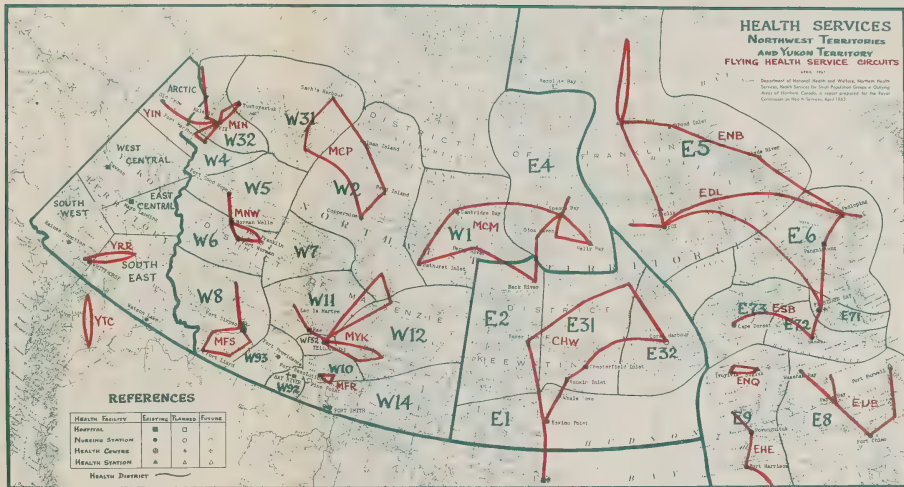
<sup>1</sup> See Volume I, Chapter 8, footnote 7, p. 337.

<sup>2</sup> Northern Health Service, *Health Services for Small Population Groups in Outlying Areas of Northern Canada*, mimeographed, Ottawa, 1963.

# HEALTH SERVICES NORTHWEST TERRITORIES AND YUKON TERRITORY FLYING HEALTH SERVICE CIRCUITS

APRIL 1951

Department of Hospital Health and Welfare, Northern Health Services, Health Services for Small Population Groups in Outlying Areas of Northern Canada, a report prepared for the Royal Commission on Health Services, April 1951







We recommend the implementation by 1967 of this plan which would ensure the greatest possible effectiveness of health personnel, and which would greatly strengthen the preventive services by regular health supervision and early detection of problems before they are allowed to develop into serious and costly emergencies. Aircraft and personnel at suitable base points for each circuit should be subsidized by the Northern Health Service so that they would be available on a stand-by basis while also serving other agencies. To ensure year-round service, landing strips should be prepared at all locations to be served by the circuits, and where feasible the use of helicopters or other aircraft requiring short landing strips should be considered.

#### *Other Services*

Among the health services provided in the eastern Arctic are the regular annual visits by health teams on the C.C.G.S. *C.D. Howe* of the Department of Transport.

There is a great need for the sake of the resident population as well as for the health personnel stationed in the North to have regular periodic visits by a specialist<sup>1</sup> both for consultation in specific cases and for more general seminar sessions for groups of personnel brought together for this purpose from the area.

Regular visits by a dentist and dental auxiliary personnel must also be ensured.

Both resident personnel and the transportation by the flying health service circuits can be fully effective only with the aid of an adequate system of telecommunications. Telephone and radio communications have been expanded in recent years but not sufficiently to provide all nursing stations and lay dispensers with a round-the-clock communication with a centre having a resident physician where they could obtain advice or summon help. Such 24-hour service should be provided to all personnel who may have to contact an outside centre at any hour of the day or night.<sup>2</sup>

It will be essential for the means of transportation and communication to be planned and provided in such a way that they can be used not only by the health services but also by other agencies. This is one important area where the co-ordination we recommend generally is absolutely necessary if all services are to be planned and operated efficiently.

Of great importance in the smaller settlements is the lay dispenser and the depots of medical supplies suitably stocked.<sup>3</sup> Lay dispensers have provided invaluable services in localities where professional personnel could not be maintained. We have emphasized the need for and the benefits of continued education for health personnel and this applies particularly to the

<sup>1</sup> Particularly in orthopaedics, ophthalmology, psychiatry, paediatrics, internal medicine.

<sup>2</sup> See Volume I, Chapter 2, Recommendation 36, p. 34.

<sup>3</sup> *Ibid.*

lay dispenser. Annual refresher courses and the manual designed and to be distributed by the Northern Health Service will greatly enhance the dispenser's effectiveness.

For the still more isolated individuals and small groups the Service has developed the "Eskimo Family Medical Pack", whose wide distribution to all in need of it we recommend.

A matter of particular concern in the North is the transportation of patients to and from a centre where necessary diagnostic or treatment procedures can be applied. We recommend that ambulance services, and in isolated areas, air ambulance services be provided as under the Health Services Programmes.<sup>1</sup> It may, however, be necessary for patients to travel to a distant centre although there is no need for an emergency ambulance service. To equalize in such cases the situation of the northern residents with those in the South, we recommend that transportation costs to the nearest centre in the South be considered part of the Medical Services Benefit.<sup>2</sup>

Conditions of the North create medical and service problems peculiar to this area and different from the problems in the South. We recommend, therefore, that the Health Sciences Research Council appropriate funds for applied research in the North, including studies of the effect on health of habits (such as nutrition) and living conditions.

### *Supply of Personnel*

As an objective and part of general policy we believe that education and training in the health professions and occupations should be given to the permanent residents of the North.<sup>3</sup> Promising beginnings have been made with the training of local residents as sanitation workers and nursing assistants. This should become an essential part of personnel policy in the North and be extended so as to offer residents education and training in all health fields either in regional centres in the North or in established schools in the South. There should be no compulsion for these trainees to practise in the North but these people are better suited and in general probably more

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<sup>1</sup> *Ibid.*, Recommendation 30(n), p. 33, and Recommendation 36, p. 34.

<sup>2</sup> *Ibid.*, Recommendation 30, p. 32.

<sup>3</sup> What D. Jenness proposes in regard to navigation, applies to a large extent also to other services in the North: "Denmark has trained some of its 30,000 Greenlanders, first cousins of our Eskimos, to handle all the traffic along the coasts of their large island. Would it not pay us to follow the same policy in the Northwest Territories—to train our Eskimos, who are familiar from childhood with the arctic environment, to man and navigate not only the coastal motor-schooners that a few of them already operate, but the large ice-breaking ships and cargo vessels that now ply our northern waters? The leaders of our Eskimos half a century ago left no successors. They raised up no Winston Churchill to take up a microphone and call to Canadians from coast to coast: 'Give us the education and the training, give us the opportunity to work, and we, in partnership with you, will build up a new Arctic.'" Jenness, D., *Eskimo Administration: II, Canada*, Arctic Institute of North America, Technical Papers No. 14, 1964, p. 178.



inclined to such a career in the North than are the more transient personnel from the South.

For the latter, conditions should be such as to retain them for at least three to five years; longer if possible. To achieve this, great care must be taken in the selection of personnel in regard to their personal suitability. In order to be able to select, however, one must attract a sufficient number of applicants. This can be done only by a realistic personnel policy, taking into account the disadvantages apparent to the candidate and his personal aspirations. These are matters of unaccustomed climate and living conditions, but also certain hardships created by the separation from relatives and education facilities. Children attending schools or universities also must receive consideration. All these matters resemble very largely the problems faced by international civil servants and we suggest that United Nations personnel policies be taken as a model in evolving policies regarding pay, allowances, leave, and travel provisions, and other exigencies peculiar to this type of employment.

This may in some cases have to include benefits in kind such as housing which, even in the South, are used to attract medical personnel into outlying areas. On the other hand, some people will prefer to build and arrange houses to their own taste and need. Housing allowances could compensate for the cost differential.

In the recruitment of personnel one should also appeal to the enthusiasm and idealism of those, particularly among the students and young graduates, who wish to apply their knowledge and skill in places where it is most needed.

We have suggested in Volume I of our Report<sup>1</sup> that a study be made by the Health Sciences Research Council of the feasibility of organizing a medical school, probably at Memorial University in St. John's, Newfoundland, to graduate physicians specially trained in the exigencies of frontier medicine. We have made particular reference to the role of such a school in the training of professional personnel from emerging nations and we have likened its function to that of St. Francis Xavier University at Antigonish, Nova Scotia, in regard to the co-operative movement. As in the latter field, there are frontiers in the fields of health and other community services in Canada. The sparsely settled areas of the provinces and the Territories are areas where we have yet to pioneer with better services, and personnel educated and trained at a school such as we envisage for Memorial University will be needed there. The facilities of this medical school could be extended to serve also in the training of other personnel, for instance public health nurses for service in the North, and it could also provide short courses or refresher

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<sup>1</sup> See Volume I, Chapter 2, p. 70.

courses for lay dispensers and certain categories of auxiliary personnel who may be called upon to render health services in isolated areas.

The northland, furthermore, provides good opportunities for the field work in connection with the school for those who want to practise frontier medicine either in Canada or elsewhere. To use it in this way would have the added advantage of familiarizing medical or nursing students with the challenge and the problems of the North thus enticing some to practise there and perhaps make others realize that they could not stand up to it though they might have planned to start their career in the North.

When such field work is undertaken in the course of the curriculum, the transportation costs to and from the station in the North should be paid from the Professional Training Grant.

### INTEGRATION OF PLANNING AND SERVICES

We have stated that the outstanding health problems of the North are those closely related to the social environment. While better health services and perhaps certain social developments have resulted in some improvements, there is no hope that health services alone can drastically reduce the mortality among infants and children, the morbidity from respiratory ailments and tuberculosis, and bring to the people of the North a longer, healthier, and happier life. This can only be achieved by a simultaneous attack on all fronts against disease, poverty, and the problems in the wake of uprooted traditions and adjustments to new social patterns.

The eventual solution must result in employment opportunities for the people of the North if the region is to become more than merely a base for weather stations, scientific outposts, or defence installations manned by personnel on a temporary basis. The prospects for economic development appear to be good; certainly hopeful beginnings have been made. But this offers no immediate or short-term solutions. It may be ten or twenty years, or a generation or two before substantial inroads will be made into the economic dependency of the Territories, and this only if the development is thoroughly planned and if it includes the education and training of the local labour force.

But what until then? Are we going to allow babies and children to die at an appalling rate, and their parents to live out their lives and die in the misery they are in now? Will those we saw in tents and snowhouses still be there next winter and the winter after? Are we going to continue to bring out the tuberculous, arrest their disease, and send them back again into the environment where they first contracted the disease? Will we continue bringing children to excellent schools for a few years to learn the

ways of the South, only to send them back into filth and poverty? Are we going to continue experimenting with educating people to a wage and money economy, only to send them back to their old ways a few years later?

There, more than in any other part of Canada, is the indivisibility of health and social well-being demonstrated. Having discussed the health problems and having made recommendations for the health services in fulfilment of our Terms of Reference, we must add that these measures to be successful have to be accompanied by measures securing proper housing, sanitation, and water supply as well as adequate livelihood. The latter should result from a productive activity. Where this cannot be provided now, it must be aimed at and prepared for while other measures are used to tide these people over their present in-between stage. Housing is cited time and again in the reports of the Northern Health Service as the main obstacle to better health. We are convinced that Canada can afford to provide its few thousand citizens in the North who are without proper housing, with accommodation that measures up to decent health standards. It cannot afford to leave these several thousands of its citizens in conditions which it rightly condemns and helps to ameliorate anywhere else in the world.

This is one aspect of needed integration of planning and services in the various areas of community development.

We have already referred to another dimension of a close inter-relationship of health and other services, namely in the area of transportation and communication. The envisaged system of air circuits and the 24-hour telecommunication service will likely not be fully used for health service purposes but be available on a stand-by basis. This equipment can, therefore, be available to the other services with appropriate arrangements for emergencies. We look upon these not specifically as health services but as services for the general administration for the area with due allowance to be made for the needs of the health service.

This, however, must not be permitted to delay the implementation of any of the health services which are planned, nor must the supply of houses and other community facilities be delayed. We do not hesitate to look upon the situation in many parts of the North as an emergency which has been permitted to continue for too long.

We believe that there are no insurmountable technical difficulties and that the necessary material can be in readiness for the opening of the next shipping season. We shall deal below with the financial problems.

What is needed, though, is closer integration of the various administrations involved so that the planning, the actual operation, and the financing can be undertaken most effectively.<sup>1</sup>

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<sup>1</sup> See The Royal Commission on Government Organization, Ottawa: Queen's Printer, 1963, Vol. 4, pp. 173-180, on the "Co-ordination of Federal Activities in the North".



## COSTS

Most of the recommendations presented at the end of this chapter deal with the improvement of certain practices: they concern largely the implementation of already existing plans which will be absorbed within the departmental budget. It is important, however, that the Northern Health Service be enabled to implement the measures budgeted for within the framework of the northern administration without the risk of having its budget reduced in the course of adjustments within the Department of National Health and Welfare, the future Federal Department of Health according to our recommendation.

A new service, however, would result from our recommendations for the flying health services circuit.<sup>1</sup> Looking at it strictly and solely as a health service, we consider its cost small in relation to the benefits, including economic ones, to be derived from it. The annual cost of operating the plan is estimated at \$230,000.<sup>2</sup> The cost of treatment services for Eskimos alone in the fiscal year 1961-62 was approximately \$3.2 million.<sup>3</sup> The cost of the flying services would be about the same as that of treating 35 cases of active tuberculosis.<sup>4</sup> And it may be noted here that in an outbreak of tuberculosis,<sup>5</sup> one small village produced within six months 80 cases of active tuberculosis,<sup>6</sup> leading the investigator to comment: "Needless to say I can think of better ways for us to spend the half million dollars in public money than this epidemic will cost us—ways that would have benefited these children a good deal more".<sup>6</sup> It must be noted that the services provided by the Northern Health Service combine both the traditional public health functions of prevention and education, and those of treatment. The same would apply to the planned flying circuits of health personnel which would have the great advantage not only of preventing certain health problems altogether but also of detecting and combating others before they grow to more serious proportions.

We also refer to Recommendation 36<sup>7</sup> providing for air ambulance, two-way radio communication, additional nursing stations and medicine depots in isolated northern and other regions. Furthermore, transportation and communication services would serve other community and departmental needs as well as those of the health service.

<sup>1</sup> As described on pp. 268 and 269.

<sup>2</sup> Composed of \$130,000 travel costs and \$100,000 as the cost of extra personnel required and their logistic support.

<sup>3</sup> Accordingly this does not include the expenditures for health services to Northern Indians and persons of "white status", the latter being borne by the Territorial Governments (Northern Health Service, *op. cit.*, pp. 6 and 7).

<sup>4</sup> Northern Health Service, *op. cit.*, p. 7.

<sup>5</sup> Moore, P. E., *An Epidemic of Tuberculosis at Eskimo Point, Northwest Territories*, Ottawa: Queen's Printer, 1963, p. 1.

<sup>6</sup> *Ibid.*, p. 16.

<sup>7</sup> See Volume I, Chapter 2, p. 34.

So much for the financing of the health services proper. Where we do expect substantial additional costs, is in the area of other community services which bear a direct relationship to health but which are outside the scope of our recommendations. Here again the departments concerned have budgeted for improvements and if we could be satisfied with the gradual development we have described, the financial aspect would be taken care of within the regular departmental budgets.

We have pointed out, however, the extreme seriousness and urgency of the situation which demands immediate action rather than a long-term development. It may perhaps mean providing now, say, 2,000 houses for northern residents which otherwise would be provided over a number of years.

This would mean paying off to these people a long overdue moral debt, something which may not be possible to accommodate in a departmental budget. Canada has now reached a stage in its history, approaching its centennial celebration, where stock is being taken of many things that we have left undone in the work-a-day rush to build the country and to put it on a sound economic foundation. We are pausing now and plan to catch up with some of the things we missed. They are the better things in life, and we are making plans now to build the art centres, museums, monuments which we did not stop to think about until now but which we feel we should have for the 100th anniversary. Now among the things we forgot, overlooked, or just did not get around to look after adequately, is the North and its people. To provide these people with proper houses would be at least as fitting a memorial to them as are the art centres to those of us in the South. Both the nature of the undertaking and the amount involved would, we feel, make this a worthy centennial project. It would, at once, enable the departments concerned to carry out the urgently needed massive action and to provide within their regular budgets for intensified measures in other community developments to go hand in hand with the improved housing and health services.

## THE NORTH IN CANADA AND ELSEWHERE

Canada's North presents a picture of daring adventure; of great personal devotion and sacrifice; of some successful economic developments; and, despite some mistakes and failures, of good government planning and many improvements in recent years. But only in recent years and, as we have pointed out, regular annual budgets are hardly suited to implement a programme of rapid development in the face of a huge backlog. Thus the North has largely remained neglected and underdeveloped; what is being done, is done half-heartedly, not being sure whether we should or should not

do more about it. Church and secular missions have been established in the North for many years; they have done some heroic things as witnessed by the massive hospitals and hostels they have erected beside their churches. Those early missionaries who went up there and others who went to ease the burden of the people, have our admiration. But there the matter has rested. Can we—economically—afford to develop the North or can we—morally—afford not to develop it?

Canada is not alone with its problems in the North and, as in so many other cases, we can ask ourselves what the others are doing and how much they can afford to do. To draw comparisons between different countries is never easy because of the many variables involved. The North, for instance, is difficult to define. We think of it as implying barren land and a cold climate, the kind we would find in Canada north of, say, the 60th parallel. In Scandinavia, however, we have to go much farther north to find similar conditions. Oslo and Stockholm, for instance, are farther north than Churchill, Manitoba. These cities, as well as Juneau and Anchorage in Alaska, and Leningrad in Russia, all lie close to the 60th parallel. Trevor Lloyd, who has travelled widely in the North has come to the conclusion that "*we have been slow in developing the North—we were even negligent in the 1920's and the 1930's, when some other countries were very active*". He adds, however: "But we have special difficulties that do not apply quite so much to the other northern lands."<sup>1</sup>

Despite these differences, for which we have to make allowance in our conclusions, the basic problems are common to all the northern region: the harsh climate, barren and inaccessible land inhabited by an originally primitive people. We have seen what Canada has done with it. How about the other countries?

In our analysis of health conditions in general, we have repeatedly followed the practice of looking at the infant mortality rate as being broadly indicative of the general health status. Following are some comparative figures for the Northwest Territories, Alaska, and Greenland, showing roughly the differences in the rates between the respective ethnic groups:

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<sup>1</sup> "North Norway, for example, is not arctic; it is at the most subarctic. You can buy a steamship ticket to travel around the North Cape of Norway on any day in the year, and that is in 70° north latitude—which is about the same latitude as the northernmost point in Alaska—which you certainly can't get around in a steamship, except in the summertime and not always then. West Greenland, where the Danes have brought about such remarkable educational, economic and social development, is also specially favoured. In the southwest, it also is an area open to navigation throughout the year and it has a relatively mild climate even in the North. Even our friends across the North Pole in the Soviet Union, although they have a well deserved reputation for being experts in the Arctic, don't have as difficult an Arctic as we do. They don't have the maze of Arctic islands that we have between the open sea and the mainland, which make sea transportation so very difficult. And the mighty northward flowing rivers of Siberia provide excellent transportation routes from the southern cities to the Arctic coast." Lloyd, T., "The Land and the People", in *The Unbelievable Land*, ed. Smith, I. N., Ottawa: Queen's Printer, 1964, p. 3.



	Infant Mortality Rate (per 1,000 live births)		
	<i>Indians</i>	<i>Eskimos</i>	<i>White Status</i>
Northwest Territories (1961)*.....	81	185	21
	<i>Non-White</i>	<i>White</i>	
Alaska (1959)†.....	72.9	26.9	
	<i>Children of Women Born in Greenland</i>		
Greenland (1961)‡.....	65.9		

\* *Report on Health Conditions in the Northwest Territories 1963*, Northern Health Service, Ottawa, 1964 (mimeographed), Table 5.

† *Statistical Abstract of the United States, 1962*, U.S. Department of Commerce, Washington, U.S. Government Printing Office, 1962, p. 68.

‡ *Sundhedstilstanden i Grønland, Landslaegens Arsberetning 1961*, Beretninger vedrørende Grønland, Sydgrønlands Bodtrykkeri, 1963, p. 19.

The difference in the conditions revealed by the infant mortality rate of the Canadian Eskimo and his counterpart in Greenland (allowing for the somewhat different definition) is further illustrated by the difference in their housing conditions.<sup>1</sup> A booklet describing the Canadian Eskimo, published in 1957, shows an Eskimo tent with the caption that "during the northern summer, canvas tents provide *sufficient* [our italics] shelter for Eskimo families".<sup>2</sup>

In Greenland, however, tents and igloos were practically non-existent by 1957, having been replaced by solid houses. In 1958, six years ago, a Canadian traveller to Greenland made the following observation regarding housing on his visit to one locality:

"We saw two or three stone and sod houses, one of which we went into, much to the dismay of the Danish officials who obviously hadn't planned this! It seemed warm and had a coal-stove burning Greenland coal but had little else besides a bed platform, of which I took a photograph. These houses are to be demolished next year and in all fairness I must say we saw very few poor houses throughout our trip."<sup>3</sup>

<sup>1</sup> See also Volume I, Chapter 5, p. 224.

<sup>2</sup> *Peoples of the Northwest Territories*, Department of Northern Affairs and National Resources, Ottawa: Queen's Printer, 1957, p. 24.

<sup>3</sup> *Indian and Northern Health Services Report on a Visit to Greenland (August-September, 1958)*, Department of National Health and Welfare, Ottawa, (mimeographed), p. 11.

A description of Greenland, the third edition of which was published in 1961,<sup>1</sup> states:

"Everywhere, whether in large or small settlements, the Greenlander has his own house and feels at home there . . . The old turf houses may still be seen at a few small settlements, but they are lined with wood and fitted with proper windows. In general, the Greenlanders now live in large or small wooden houses, their size and appearance governed by the man's resources and his wife's skill in housekeeping."

While primitive one-room houses still exist, "as a general rule, the houses are big enough to hold a kitchen and living-room below and one or two bedrooms above".<sup>2</sup> This is part of the general development.

Regarding the housing situation in Alaska, it is estimated "that about one-half of the Alaska natives live in modest frame buildings constructed of commercial lumber or of driftwood, packing crates, and other miscellaneous pieces of wood. Of the remainder, two-thirds live in crude log houses, one-third (or fewer) in sod igloos excavated underground for purposes of warmth".<sup>3</sup>

We have no comparable statistics available for the Soviet Union but the general impression is one of rapid and spectacular development of the Russian Arctic. Thanks to specially designed ships and large icebreakers, navigation in the Arctic is ensured for five to six months. "Igarka, one of the Soviet biggest ports lying north of the Arctic Circle on the same latitude with the Canadian towns of Bathurst-Inlet and Aklavik, is now open for navigation not for a week or a week and a half, as it was a few years ago, but for four to five months a year. Owing to icebreakers the navigation period increased twice at still higher latitudes of the Arctic region."<sup>4</sup> Apart from the cities and industrial centres in Northern Siberia, life in the small and remote settlements has also changed. We have before us the description of life in the villages of the Chukotka Peninsula, the piece of land on the Arctic Circle jutting out from the Asian Continent towards the Bering Strait: "In the old days when people spoke of Chukotka, they always associated it with hunting and reindeer-breeding. Today, among the indigenous population, there are workers of different trades, doctors, engineers, teachers, writers, sea captains and livestock experts."<sup>5</sup> These latter are needed to tend to all sorts of livestock acclimatized to the area including cattle,

<sup>1</sup> *Greenland*, The Royal Danish Ministry for Foreign Affairs, Denmark; Perfecta-1961, pp. 50 and 51.

<sup>2</sup> *Ibid.*, p. 52.

<sup>3</sup> *Eskimos, Indians, and Aleuts of Alaska—A Digest*, U.S. Department of Health, Education, and Welfare, Washington, 1963, p. 5.

<sup>4</sup> Fedorovich, V., "Crushing Icefields of Baltic, in *Soviet Union Today*, June, 1964, p. 30.

<sup>5</sup> "The Rebirth of Chukotka", editorial in *Soviet Union Today*, March, 1964, p. 18.

poultry, and farm animals.<sup>1</sup> In the Soviet Union alone about a million people live in the high Arctic. More than five million people inhabit the northern forest areas connected with the northern sea route.<sup>2</sup>

We have at the outset of these international comparisons emphasized the differences and disadvantages of the Canadian North as compared to that of our neighbours. We should add a reference to the far greater resources of the United States and the Soviet Union which also render comparisons somewhat invidious. But what about Denmark's accomplishments in Greenland? The population of Greenland (33,000 in 1961) is only slightly smaller than that of the Yukon and the Northwest Territories (39,000). The Danes have a considerably lower per capita income than Canadians, and their Gross National Product is less than one-fifth of Canada's.<sup>3</sup> Denmark has to ship building materials, medical supplies, some foodstuffs and most other products across some 2,000 miles of the North Atlantic.

But here too there is a difference, apart from certain climatic factors. The Danes had a head start in developing Greenland. They can boast that "the work of educating the Greenlanders began over two hundred years ago and illiteracy was abolished more than a hundred years ago".<sup>4</sup> A hundred years ago, Canadians were still busy consolidating the southern parts of their country, but since then have overtaken or caught up with many other countries in their economic, social, and political development and the time has surely come when the North must be included in this development. In the words of a former Deputy Minister of the Department of Northern Affairs and National Resources and Commissioner of the Northwest Territories, "The North will not then be run by us outsiders, with the real owners looking on. It will be run by the people who live there. It can be done. Greenland has gone a long way toward that goal and I am convinced that we can do it too".<sup>5</sup>

The government departments and private agencies concerned with and interested in this area and its people have accomplished much to be proud of. They and their officers have the know-how, the ability, and the will to go ahead. There is a need now for integrated planning of their efforts, but the foremost need is for an end to the public apathy and indifference and the massive financial and moral support for those who can do the job.

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<sup>1</sup> *Ibid.*

<sup>2</sup> Shumsky, P., "Arctic Problems and Warm Meetings", in *Soviet Union Today*, February, 1964, p. 3.

<sup>3</sup> United Nations, *Year Book of National Accounts Statistics 1962*, New York, 1963.

<sup>4</sup> Brun, E., "Greenland Today", mimeographed pamphlet, pp. 4 and 5.

<sup>5</sup> Robertson, R. G., *op. cit.*, p. 137.



## RECOMMENDATIONS

What then are the steps necessary to remedy the grave situation we have described? We have no illusions that it is going to be an easy task but we are convinced that Canada can do it, can afford it and, in fact, must do it now to make up for the time lost and opportunities missed. We cannot overemphasize the need for development on a broad scale of social and economic action of which health services are only a part but the part this Commission is most immediately concerned with.

The inescapable conclusion in regard to health services is that there must be a comprehensive master plan for the speedy implementation of organized services capable not only of dealing with emergencies such as epidemic outbreaks, but providing a permanent and continuing surveillance and treatment service.

We have recommended<sup>1</sup> that the Federal Government enter into similar arrangements with the territorial administrations as those envisaged for the provinces, for the introduction and operation of comprehensive and universal programmes of personal health services, including:

Medical services,<sup>2</sup>

Dental services for children, expectant mothers, and public assistance recipients,<sup>3</sup>

Prescription drug services,<sup>4</sup>

Optical services, for children and public assistance recipients,<sup>5</sup>

Prosthetic services,<sup>6</sup>

Home care services.<sup>7</sup>

In addition, the hospital insurance programme is to continue with the recommended changes.<sup>8</sup>

We refer particularly to Recommendation 36,<sup>9</sup> providing for special services in northern regions, including air ambulance, two-way radio communication, nursing stations and medicine depots.

Under the circumstances prevailing in the northern region, we recommend as an addendum to Recommendation 59<sup>10</sup> that the contributory payment

<sup>1</sup> See Volume I, Chapter 2, Recommendation 1, p. 19.

<sup>2</sup> *Ibid.*, Recommendations 29 to 38, pp. 31-34.

<sup>3</sup> *Ibid.*, Recommendations 39 to 57, pp. 36-39.

<sup>4</sup> *Ibid.*, Recommendations 58 and 60, p. 41.

<sup>5</sup> *Ibid.*, Recommendations 83 to 94, pp. 49 and 50.

<sup>6</sup> *Ibid.*, Recommendations 113 to 115, p. 60.

<sup>7</sup> *Ibid.*, Recommendations 116 to 123, p. 62. In regard to organized home care services in northern communities, we refer to the experience gained by an existing home care plan under frontier conditions in Grande Prairie, Alta.

<sup>8</sup> *Ibid.*, Recommendations 95 to 112, pp. 53-58.

<sup>9</sup> See Volume I, Chapter 2, p. 34.

<sup>10</sup> *Ibid.*, p. 41.

of \$1.00 per prescription should not apply under the Health Services Programme of the Territories.

In order, however, to bring these services to the wide areas of the Territories which cannot develop the type of community services we have described in the foregoing chapters of our Report, additional measures are necessary. Bearing in mind the great and compelling need for a comprehensive, imaginative and far-reaching approach to meeting the health and related requirements of the people in Canada's northland, we make the following recommendations to suitably supplement those concerning the Health Services Programmes. We also stress that in view of the great urgency for improved conditions in these areas, these recommendations be given the same high priority as we have assigned to the programmes for a Children's Dental Programme and for the services to retarded children and crippled children.<sup>1</sup>

*The Commission recommends:*

*Northern Health Service Plan*

235. That every possible support be given to the Northern Health Service of the Department of National Health and Welfare to speed the implementation of the five-year plans to provide adequate health services for the Yukon and the Northwest Territories, and that the implementation be telescoped into a shorter period of time as resources become available.
236. That the Northern Health Service implement by 1967 its proposed comprehensive flying health service system linking the various communities with their health service base.<sup>2</sup>
237. That, as far as possible, such transportation services be integrated with the needs of other agencies; and that at each of the communities covered, suitable landing strips and other facilities be prepared and maintained to serve aircraft and, where feasible, helicopters in all seasons.
238. That an integrated telecommunication system be established to provide a 24-hour service for voice communication and that a visual system be implemented when this becomes practical; such communication systems for the purposes of the health services to be integrated with the needs of other agencies in a community.
239. That provisions be made for regular periodic visits to northern stations by medical specialists for consultation and seminars.

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<sup>1</sup> *Ibid.*, p. 92.

<sup>2</sup> See pp. 268 and 269.

240. That provisions be made for regular periodic visits to northern stations by dentists and dental auxiliary personnel.
241. That training, refresher courses, manuals and the necessary equipment be provided to maintain a high degree of effectiveness among lay dispensers.
242. That the provision of "family medical packs" to isolated families and small groups be speeded up and that the necessary instruction manuals be made available.

*Northern Health Service*

243. That, while the present five-year plans for the improvement of health services in the Yukon and the Northwest Territories are implemented, more far-reaching plans for a further five-year period be formulated in order to ensure the future development and improvement of health services in the Territories.
244. That the budgetary requirements of the Northern Health Service of the Department of National Health and Welfare be considered within the framework of the territorial budgets rather than as part of the departmental budget.

*Personnel: Recruitment, Education, and Employment Conditions*

245. That every effort be made towards the training of indigenous residents of the Territories by intensifying the ongoing training of nursing assistants and progressively for more advanced education and training of professional and technical health personnel.
246. That, as part of a seven-year crash programme, grants be made available from the Professional Training Grant, to cover the cost of such education or training.
247. That, on the coming into operation of a medical school at Memorial University at St. John's, Newfoundland,<sup>1</sup> part of the curriculum and training be directed towards the needs of health services in Canada's North and other sparsely settled areas.
248. That Memorial University at St. John's, Newfoundland, establish in connection with its future medical school, specialized courses for the training of other health personnel in the specific knowledge and skills required for the practice in the North and other sparsely settled areas.

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<sup>1</sup> See Volume I, Chapter 2, pp. 70 and 71.



249. That financial assistance be made available from the Professional Training Grant to enable personnel in training for health service in the North to do their field work in the Yukon or the Northwest Territories.
250. That conditions of employment for health personnel be such as to attract and maintain for periods of at least three to five years well qualified personnel. This relates to remuneration as well as other benefits designed to equalize working conditions as far as possible with those in the South. Among such provisions should be:
- (a) competitive and attractive salaries and allowances to compensate for cost differentials,
  - (b) upgrading of positions,
  - (c) leave of absence provisions to provide for
    - (i) regular periodic vacations with transportation for the personnel and their family paid to and from a predetermined home base;
    - (ii) compassionate leave for the personnel in cases of serious illness in the family, and transportation paid to and from the nearest centre in the South for personnel and/or their family in the case of serious illness or death among their nearest relatives in the South;
    - (iii) educational leave to facilitate continuing education and self-improvement;<sup>1</sup>
  - (d) financial aid towards the education and maintenance of children where service in the North entails separation from their parents,
  - (e) suitable housing accommodation.
251. That the selection of health personnel for service in the North be exercised with great care with regard to professional qualification as well as personal suitability and aptitude required under the circumstances.

*Transportation as a Medical Care Benefit*

252. That all residents of the Territories requiring medical attention not available in their home areas be flown out for such attention and returned on discharge as part of the Medical Services Benefit.

*Research*

253. That the Health Sciences Research Council provide funds for the conduct of applied research into specific health and health service problems in the North.

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<sup>1</sup>For example, physicians may be granted one year's study leave in the middle of a 5-year term of office.

*Co-ordination of Northern Government Activities*

- 254. That the existing agencies for the co-ordination of the activities in the Territories of federal government departments be strengthened, with adequate representation for the health services, both at departmental headquarters and at the regional and local levels.**

*General Community Development*

- 255. That intensive efforts be made for general community services to be developed simultaneously with the health services.**
- 256. That the Centennial Commission as a centennial project survey the possibility of adopting the implementation of a demonstration project, in two far northern locations, of community development including adequate housing, proper sanitation services and essential education, health and other facilities.**

## CONCLUSION

We expect that our programme for the health services of the North will be met by some with comments similar to those regarding the proposed Health Services Programmes generally: they may be well intentioned but Canadians cannot afford to pay for them. We have, in Volume I, demonstrated that the Health Services Programmes are well within the reach of Canada's present and future economy. The cost of improved health services will, to a large extent, be matched by a reduction in welfare expenditures, especially if health services are accompanied by the general development of the area. Investment in this general development will yield economic returns even more immediately than health services alone, but we have no illusion that at least in the immediate future better services will mean higher costs and we have to answer the questions: first, can Canada afford it; second, if so, are Canadians willing to pay the cost.

Regarding the ability to pay, there can be no doubt in the light of our cost analysis in Volume I, and in the light of the degree of northern development, achieved not only by the United States and the Soviet Union, but also by the smaller Scandinavian countries and especially by Denmark in Greenland. Surely, Canada can match this.

There remains the question of whether Canadians are willing to shoulder the extra cost of health and other developments in the North. The answer to this must be found in the answer to the question whether we want the North as an integral part of Canada, or whether we write it off as a liability and withdraw our national boundaries to the 60th parallel, leaving

the Territories to be independent and fend for themselves, or more likely, to be absorbed sooner or later by their neighbours to the west, east, or north. This latter alternative, if ever taken seriously, has been discarded by all responsible politicians and scientists. But if, and as long as, we want the North to be part of Canada, we must treat it as such and we must extend to Canadians in these parts the same services, "within the limitations imposed by geographic factors",<sup>1</sup> as are provided for Canadians elsewhere.

We have emphasized that in order to become fully effective, health services must be accompanied by the vigorous and well-planned development of other aspects of life in the North. Not only some ill-conceived but also many splendid but isolated projects undertaken in the past have wasted precious time and money, and often turned enthusiasm into despair and frustration or resigned apathy, because they were limited in scope and not followed through as part of a general plan.

We have shown that health services by themselves cannot eliminate health problems such as tuberculosis or a high infant mortality which are largely the result of poor environment. The provision of jobs depends on education and training, and unless accompanied by improved health will not, in the long run, improve the economic situation. Better housing and other environmental conditions will yield results only if accompanied by health services, education, and economic measures. Education, with the best of schools, will fail to achieve its ends unless it leads to the logical conclusion of employment and decent community life.

There is a good example, in Canada, of what a concerted development of health services together with general social and economic improvements can accomplish. We compare below the average annual infant mortality rates in the Northwest Territories and Newfoundland for the periods 1931-1935 and 1959-1963, respectively:<sup>2</sup>

	Northwest Territories	Newfoundland
1931-1935.....	110	116
1959-1963.....	122	38

It may be that the increase in the Northwest Territories is more apparent than real due to more complete registration and perhaps random fluctuations.

<sup>1</sup> See Volume I, Chapter 1, p. 11.  
<sup>2</sup> Based on Dominion Bureau of Statistics, *Vital Statistics, 1962*, Ottawa: Queen's Printer, 1964, p. 191; and *Vital Statistics, 1963, Preliminary Annual Report*, Ottawa: Queen's Printer, 1964, p. 4.



But the spectacular decline in Newfoundland demonstrates the combined effect of better health services and improved living standards generally.

In drawing this comparison, we are aware of important differences between Newfoundland and the Northwest Territories, geographically as well as economically. But the fact remains that the health of the people in Newfoundland has improved whereas it has not—certainly not nearly to the same extent—in the Northwest Territories despite the expansion of health services. Hence our contention that simultaneous development of health and other community services is necessary if worthwhile progress is to be foreseen in any particular field.

Whether or not the extension of these services in the North will “pay” in the economic sense, is of secondary importance. We have expounded our view that “the achievement of the highest possible health standards for *all* our people must become a primary objective of national policy and a cohesive factor contributing to national unity”.<sup>1</sup> This includes Canadians in the North as well as in the South. Even if provided with the best services possible under the circumstances, Canadians in the North will be facing hardships and problems not encountered by their fellow citizens in the South.

We do not subscribe to the view that improving community services in the North serve only to maintain artificial and useless communities.<sup>2</sup> Even if there were no indigenous people in the North and no prospects for economic development, Canadians would go there to establish and maintain stations to aid transportation, communications, weather forecasting and other scientific exploration, as well as some military installations. To develop community services in Greenland is not an economic proposition for Denmark, yet Denmark has raised the living standards of Greenlanders considerably though this has to be done across 2,000 miles of ocean.

It has been said “that the North, with its vast stores of hidden wealth, is ready to come into its own. The wonder and challenge of the North must become a vital part of our national consciousness. All that is needed is an imaginative policy which will open its doors to Canadian initiative and enterprise”.<sup>3</sup>

Such a policy, to be truly effective, requires a national effort on the part of all governments. This point was emphasized by another Prime Minister: “I think all the Provincial Governments and the Federal Government appreciate the importance of development in the North. Progress is being made and I sympathize with any Canadian’s view that this progress

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<sup>1</sup> See Volume I, Chapter 1, p. 11.

<sup>2</sup> We have heard the statement that what is happening in the North is only “helping the Eskimos to look after the white people who are there to help the Eskimos”.

<sup>3</sup> Diefenbaker, The Right Honourable J. G., speech delivered at Quebec City, April 27, 1957.

should be speeded up and developed and that greater recognition should be shown in action of the essential importance of the North Country".<sup>1</sup>

One of the problems in maintaining adequate services in the North has been the failure to attract and retain qualified personnel. In this regard, lessons can be learned from the international civil service where it is also largely a question of attracting people to places remote from their usual residence.

We strongly urge that the imaginative policy we propose be undertaken, and implemented as a massive crash programme. The funds? Much of the cost is already provided for in departmental budgets which will profit from greater and more effective interdepartmental co-ordination. To facilitate a massive start to cope with the backlog in programmes such as housing, it may be timely and appropriate to make available centennial funds and to identify certain projects as centennial contributions by Canada to the people of the Territories.

We also think that partnership with private enterprise should be strengthened for the benefit of both partners.

We wish to see our plan understood as something far greater than a welfare programme for those people in the North who are not as yet sharing fully in Canada's progress. It should mean that the North and its people be accepted in fact as part of Canada. This country is now approaching its centennial celebrations. Many worthy memorials are planned on this occasion in all the provinces. The Canadians in the Territories too should have occasion to share in this jubilee. At some time in the future they too will demand monuments and art centres. At this time, however, what greater memorial could we erect in these parts than healthy communities?

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<sup>1</sup> Pearson, The Right Honourable L. B., at a Press Conference in Vancouver, September 17, 1964.





## Recommendations

The Commission presented in Volume I, Chapter 2, its main recommendations Nos. 1 to 200 for a Health Services Programme for Canada. We present in Volume II a number of additional recommendations in areas that round out the comprehensive Health Services Programme submitted in Volume I. These supplementary recommendations have been included in Chapters 2 to 9 and the evidence and the reasoning leading to their formulation have been presented in the text. We reproduce these Recommendations here, Nos. 201 to 256, under the following headings, with a reference to the appropriate chapters shown in brackets.

1. Pharmacists (Nos. 201-203, Chapter 2)
2. Paramedical Personnel (Nos. 204-210, Chapter 3)
3. Opticians (Nos. 211-212, Chapter 3)
4. Professional Titles (No. 213, Chapter 3)
5. Radiography (Nos. 214-217, Chapter 3)
6. Ambulance Services (Nos. 218-219, Chapter 3)
7. Health Research (Nos. 220-222, Chapter 4)
8. Voluntary Organizations (Nos. 223-226, Chapter 6)
9. Federal Department of Health (No. 227, Chapter 7)
10. General Practitioners (Nos. 228-229, Chapter 8)
11. Rehabilitation (Nos. 230-232, Chapter 8)
12. Health Services Administrators (Nos. 233-234, Chapter 8)
13. Northern Health Service Plan (Nos. 235-256, Chapter 9).

Certain of the recommendations in Volume I have been modified to clarify the full intent of the Commission and these are shown in the form of addenda at the end of the chapter, covering Recommendations Nos. 59, 61, 62, 80, 109 and 195.

Recommendations Nos. 1 to 200 in Volume I and 201 to 256 in Volume II represent the sum total of all the recommendations made by this Commission.

### *1. Pharmacists*

201. That small hospitals, particularly in communities which find it difficult to employ a full-time pharmacist, employ a part-time pharmacist to serve selected neighbouring hospitals jointly or to combine retail pharmacy with hospital employment.
202. That, in view of the shortage of qualified pharmacists in the Atlantic Provinces, there be established a school of pharmacy at Memorial University, St. John's, Newfoundland, at the same time as the medical school we have recommended and as a department thereof.<sup>1</sup>
203. That annual Professional Training Grants of \$2,000 each be made available to graduate pharmacists pursuing post-graduate studies in pharmacy.

### *2. Paramedical Personnel*

204. That there be established in each province a Paramedical Education Planning Committee, advisory to the provincial Health Planning Councils, to plan and direct the orderly development of the education and training of paramedical personnel. The Committee should be representative of the various provincial paramedical associations, university(ies), the Health Services Commission and the Department of Education, and advise the Health Planning Council of those paramedical fields in which shortages of personnel exist, training facilities needing expansion, training programmes and other matters concerned with the supply of and demand for paramedical personnel.
205. That, to encourage suitable personnel to enter and remain in these occupations, salaries commensurate with their training and responsibilities and similar to those in comparable fields be paid by federal and provincial agencies and by hospitals.
206. That financial assistance under the Hospital Insurance and Diagnostic Services Act, and under the Technical and Vocational Training Assistance Act be expanded immediately to support any qualified applicants enrolling in courses of training prescribed for those paramedical fields in which shortages exist. On the national level we foresee shortages particularly in the following occupations: medical record librarians, physiotherapists, occupational therapists, speech therapists and audiological therapists, and medical social workers.
207. That financial assistance be provided to set up Departments of Rehabilitation in the medical schools at l'Université de Sherbrooke

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<sup>1</sup> See Volume I, Chapter 2, Recommendation 141, p. 71.

and at the University of Ottawa and such other universities as may be able to provide adequate training for paramedical personnel in this field.

208. That training facilities for speech therapy and audiological therapy be established in association with the medical schools of Dalhousie University, University of British Columbia within its Health Sciences Centre, and with one of the medical schools located in the Prairie Provinces.
209. That training facilities for physiotherapy and occupational therapy be provided in association with those medical schools which do not already possess such facilities.
210. That, in order to provide a continuous and uninterrupted supply of qualified paramedical personnel, more efforts be made to attract men into certain health occupations by ensuring working conditions, and especially salaries, competitive with other comparable occupations.

### *3. Opticians*

211. That legislation regarding the qualification and licensing of dispensing opticians be enacted in all provinces and territories.
212. That legislation be enacted restricting the sale of contact lenses by anyone, except on prescription by an ophthalmologist.

### *4. Professional Titles*

213. That legislation be enacted to provide that no practitioner of any healing art without a doctoral degree granted by a recognized university be permitted to designate himself as "Doctor", or to use any letter following his name indicating the same, or to advertise himself as such.

### *5. Radiography*

214. That provincial legislation provide, to the extent that this is not already done, for the licensing of X-ray equipment, technicians, and operators, according to accepted uniform standards and ensuring that such standards are maintained after the initial licensing.
215. That provincial legislation be enacted to restrict the advertisement of diagnostic X-ray facilities.
216. That the proper scientific agencies continue the intensive study and observation of the consequences of radiation, including that resulting from diagnostic radiography.



217. That the reading and interpretation of radiographs be undertaken only by recognized personnel.

### *6. Ambulance Services*

218. That, in order to ensure that ambulance services are of a high quality, legislation be enacted in all provinces and territories establishing standards for the training and qualifications of ambulance staff, and for the equipment used, and that these be subject to licensing.
219. That, to ensure that such services are readily available, the provincial Health Planning Councils establish guide lines for the efficient organization of ambulance services on a regional or community basis, and, where required, of air ambulances and other emergency transport.

### *7. Health Research*

220. That, in the provision of educational facilities for health professional personnel at research institutions, medical schools, dental schools, schools of public health and schools of nursing, adequate library facilities be provided to be financed from the Health Facilities Development Fund and the Health Professions University Grant.
221. That, over the period 1966-1971, the grants made by the Federal Government towards the operating budget of the Health Sciences Research Council be progressively increased by \$3 million a year.
222. That, where funds are not available from other sources to offset the decline in research funds from the National Institutes of Health, or if sufficient funds are not forthcoming from voluntary organizations and foundations to meet the projected needs in 1971, the deficiency be met by a further expansion of federal grants to the Health Sciences Research Council.

### *8. Voluntary Organizations*

223. That agencies concerned with the prevention of accidents participate in the work of the Health Planning Councils at the various levels and in particular with regard to measures to prevent highway accidents.
224. That voluntary agencies have an integral place in any comprehensive health care programme and that they participate actively in the work of the various planning councils.

225. That all voluntary health organizations submit an Annual Financial Report to the Department of National Health and Welfare, describing their functions as well as showing assets and liabilities, income by source and expenditures under appropriate headings, duly audited in accordance with accepted auditing practices.
226. That the Department of National Revenue take cognizance of the organizations so reporting, when recognizing donations as charitable exemptions under the Income Tax Act.

### *9. Federal Department of Health*

227. That, in view of the growing responsibilities of the Department of National Health and Welfare in both the health and the welfare fields, and particularly in view of the increased responsibilities that would be placed on the Department with the implementation of the Health Services Programmes, and taking account of the advisability of administering health services separately from welfare services, the Health Branch be restored to the status of a separate Department of Health.

### *10. General Practitioners*

228. That the Association of Canadian Medical Colleges, in consultation with the College of General Practice of Canada and others concerned give immediate attention to the question of setting up administrative Departments of General Practice in the teaching hospitals and subsequently, Chairs of General Practice in the Faculties of Medicine.
229. That, as part of a seven-year crash programme, special Professional Training Grants of \$5,000 per year be allocated to medical graduates undertaking post-graduate study to qualify for the teaching of general practice in the Faculties of Medicine.

### *11. Rehabilitation*

230. That the Vocational Rehabilitation of Disabled Persons Act, 1961, be amended by removal of its restriction to *vocational* rehabilitation and that the terms "disabled person" and "vocational rehabilitation" be revised and redefined accordingly.
231. That a new rehabilitation agency of the Federal Government be established, with representation from the Federal Department of Health, the Department of Welfare, the Department of Labour, the Department of Veterans Affairs, and the Unemployment Insurance Commission reporting to Parliament through the Minister of Labour.

232. That the National Advisory Council on the Rehabilitation of Disabled Persons, with representation from the federal departments concerned, provincial governments, voluntary agencies, medical professions, universities, and employer and employee organizations, act in advisory capacity to the new rehabilitation agency.

### *12. Health Services Administrators*

233. That the Health Professions University Grant be available for the establishment of undergraduate and post-graduate courses in health services administration at selected Canadian universities.
234. That, as part of a seven-year crash programme, special Professional Training Grants of \$3,500 per year be made available to graduate students proceeding to a higher degree in such courses.

### *13. Northern Health Service Plan*

235. That every possible support be given to the Northern Health Service of the Department of National Health and Welfare to speed the implementation of the five-year plans to provide adequate health services for the Yukon and the Northwest Territories, and that the implementation be telescoped into a shorter period of time as resources become available.
236. That the Northern Health Service implement by 1967 its proposed comprehensive flying health service system linking the various communities with their health service base.<sup>1</sup>
237. That, as far as possible, such transportation services be integrated with the needs of other agencies; and that at each of the communities covered, suitable landing strips and other facilities be prepared and maintained to serve aircraft and, where feasible, helicopters in all seasons.
238. That an integrated telecommunication system be established to provide a 24-hour service for voice communication and that a visual system be implemented when this becomes practical; such communication systems for the purposes of the health services to be integrated with the needs of other agencies in a community.
239. That provisions be made for regular periodic visits to northern stations by medical specialists for consultation and seminars.

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<sup>1</sup> See pp. 268 and 269.



240. That provisions be made for regular periodic visits to northern stations by dentists and dental auxiliary personnel.
241. That training, refresher courses, manuals and the necessary equipment be provided to maintain a high degree of effectiveness among lay dispensers.
242. That the provision of "family medical packs" to isolated families and small groups be speeded up and that the necessary instruction manuals be made available.
243. That, while the present five-year plans for the improvement of health services in the Yukon and the Northwest Territories are implemented, more far-reaching plans for a further five-year period be formulated in order to ensure the future development and improvement of health services in the Territories.
244. That the budgetary requirements of the Northern Health Service of the Department of National Health and Welfare be considered within the framework of the territorial budgets rather than as part of the departmental budget.
245. That every effort be made towards the training of indigenous residents of the Territories by intensifying the ongoing training of nursing assistants and progressively for more advanced education and training of professional and technical health personnel.
246. That, as part of a seven-year crash programme, grants be made available from the Professional Training Grant, to cover the cost of such education or training.
247. That, on the coming into operation of a medical school at Memorial University at St. John's, Newfoundland,<sup>1</sup> part of the curriculum and training be directed towards the needs of health services in Canada's North and other sparsely settled areas.
248. That Memorial University at St. John's, Newfoundland, establish in connection with its future medical school, specialized courses for the training of other health personnel in the specific knowledge and skills required for the practice in the North and other sparsely settled areas.
249. That financial assistance be made available from the Professional Training Grant to enable personnel in training for health service in the North to do their field work in the Yukon or the Northwest Territories.

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<sup>1</sup> See Volume I, Chapter 2, pp. 70 and 71.

250. That conditions of employment for health personnel be such as to attract and maintain for periods of at least three to five years well qualified personnel. This relates to remuneration as well as other benefits designed to equalize working conditions as far as possible with those in the South. Among such provisions should be:
- (a) competitive and attractive salaries and allowances to compensate for cost differentials,
  - (b) upgrading of positions,
  - (c) leave of absence provisions to provide for
    - (i) regular periodic vacations with transportation for the personnel and their family paid to and from a pre-determined home base;
    - (ii) compassionate leave for the personnel in cases of serious illness in the family, and transportation paid to and from the nearest centre in the South for personnel and/or their family in the case of serious illness or death among their nearest relatives in the South;
    - (iii) educational leave to facilitate continuing education and self-improvement;<sup>1</sup>
  - (d) financial aid towards the education and maintenance of children where service in the North entails separation from their parents,
  - (e) suitable housing accommodation.
251. That the selection of health personnel for service in the North be exercised with great care with regard to professional qualification as well as personal suitability and aptitude required under the circumstances.
252. That all residents of the Territories requiring medical attention not available in their home areas be flown out for such attention and returned on discharge as part of the Medical Services Benefit.
253. That the Health Sciences Research Council provide funds for the conduct of applied research into specific health and health service problems in the North.
254. That the existing agencies for the co-ordination of the activities in the Territories of federal government departments be strengthened, with adequate representation for the health services, both at departmental headquarters and at the regional and local levels.

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<sup>1</sup> For example, physicians may be granted one year's study leave in the middle of a 5-year term of office.

255. That intensive efforts be made for general community services to be developed simultaneously with the health services.
256. That the Centennial Commission as a centennial project survey the possibility of adopting the implementation of a demonstration project, in two far northern locations, of community development including adequate housing, proper sanitation services and essential education, health and other facilities.

## ADDENDA TO RECOMMENDATIONS IN VOLUME I

In reviewing our Recommendations made in Volume I we find it desirable, for the sake of clarity and completeness, to round out these Recommendations in a few specific instances, listed below:

RECOMMENDATION 59 requires, in the provision of the drug benefit, a contributory payment of \$1.00 by the purchaser for each prescription. The provision for a contributory payment shall not apply in the Yukon and the Northwest Territories.<sup>1</sup>

RECOMMENDATION 61 provides for the enlargement of the Drug Advisory Committee to the Department of National Health and Welfare.<sup>2</sup> We now suggest that among the expanded membership of that Committee there should be added representatives of the dental profession.

RECOMMENDATION 62 provides, among other matters, for the establishment of an information service which would issue periodic bulletins providing the latest information on drugs and drug therapy to physicians, pharmacists and hospitals.<sup>3</sup> Among the recipients of the bulletins, there should be added the members of the dental profession.

RECOMMENDATION 80 deals with the expansion of research grants by the Health Sciences Research Council.<sup>4</sup> The term "non-professional" in this paragraph should read "professional".

RECOMMENDATION 109 suggests that depreciation allowances on the value of buildings and fixed equipment, less the amount paid by federal and provincial grants, be recognized as shareable costs.<sup>5</sup> The introduction to Recommendation 109 speaks of interest and depreciation as shareable costs; hence, this Recommendation should be expanded to include interest as well as depreciation allowances as shareable cost.

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<sup>1</sup> See Volume I, Chapter 2, p. 41.

<sup>2</sup> *Ibid.*, p. 41.

<sup>3</sup> *Ibid.*, p. 42.

<sup>4</sup> *Ibid.*, p. 44.

<sup>5</sup> *Ibid.*, pp. 56 and 57.



RECOMMENDATION 195 requires reinterpretation in the light of the changing federal-provincial fiscal relationships and particularly the arrangements being developed permitting provinces to opt out of certain federal-provincial shared programmes.<sup>1</sup> In so far as a province elects to operate outside the grants-in-aid system through the opting-out device, such a province should be permitted to operate its health care programmes along the lines recommended in this Report with its share of financial assistance obtained through the collection of revenues from tax fields vacated by the Federal Government, equivalent to the amount it would have received from the Federal Government under a grants-in-aid system.

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<sup>1</sup> *Ibid.*, p. 88.

ALL OF WHICH WE RESPECTFULLY SUBMIT  
FOR YOUR EXCELLENCY'S CONSIDERATION

*Samuel W. Hall*

Chairman

Commissioners

*Ellice Guird*

*D. M. Bagan.\**

*V. J. Prestove*

*C. L. Strachan*

*Arthur F. Van Wart*

*B. L. Blishen.*

Director of Research

December 7, 1964.

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\* See addendum on following page.

## ADDENDUM BY DR. D. M. BALTZAN

While fully agreeing with the views of my fellow Commissioners as expressed in the recommendations contained in Volumes I and II, I wish to add the following personal observation. When a patient chooses to obtain services from a physician practising independently of the Medical Services Programme and pays that physician an amount agreed upon, the patient should be entitled to be reimbursed by the Health Services Commission of his province the amount the Commission would have paid a physician practising under the Programme for the same service.

*January 8, 1965.*

\* \* \*

## ERRATA TO VOLUME I

Page 232, para. 2, line 3: 1,150 *should read* 116.7.

Page 509, para. 1, line 3: may outweigh *should read* may not outweigh.

Page 826, Table 20-12, last column: 27.9 *should read* 24.9.

Page 849, para. 3, lines 3 and 4: \$8.27 and \$9.31 *should read* \$7.09 and \$8.25.

Page 850, Table 20-25, last column: 8.27 and 9.31 *should read* 7.09 and 8.25.



## APPENDIX A

### STAFF OF THE COMMISSION <sup>1</sup>

#### RESEARCH STAFF

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Director of Research

R. Kohn

Assistant Director of Research

H. Alexis

K. J. Barnes\*

M. Chevrier

G. F. Boreham\*

F. Paltiel\*

S. Judek\*

J. L. MacDougal

Research Associates and Assistants

#### CONSULTANTS TO THE COMMISSION

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Research Consultant

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Economic Consultant

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G. Robertson

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F. Seguin

V. Watkins

---

\* Research Associates.

<sup>1</sup> See Volume I, Appendix C, for staff prior to March 31, 1964.



## APPENDIX B

### STUDIES PREPARED FOR THE COMMISSION

<i>Study Title</i>	<i>Study Directors and Associates</i>
Medical Education in Canada	Dr. J. A. MacFarlane Dr. R. C. Dickson Dr. R. Dufresne Dr. G. H. Ettinger Dr. J. W. Macleod Dr. J. F. McCreary
Medical Manpower in Canada	Dr. S. Judek
Group Practice	Dr. J. A. Boan
Dental Manpower in Canada	Dr. B. McFarlane
Dental Education in Canada	Dr. K. J. Paynter
Utilization of Dentists in Canada	Dr. O. Hall
Nursing Education in Canada	Dr. Helen K. Mussallem
Utilization of Nurses in Canada	Dr. Muriel Uprichard
Sociological Factors Affecting Recruitment into the Nursing Profession	Dr. R. A. Robson
Pharmacist Manpower in Canada	Mr. T. M. Ross
Recruitment, Education and Utilization of Pharmacists in Canada	Prof. F. A. Morrison
Paramedical Manpower in Canada	Mr. A. D. Boyd
Study of Chiropractors, Osteopaths and Naturopaths in Canada	Dr. D. Mills
Psychiatric Care in Canada: Extent and Results	Dr. A. Richman
Trends in Psychiatric Care	Dr. D. G. McKerracher
Tuberculosis in Canada	Dr. G. J. Wherrett
Health Status of the Canadian People	Dr. R. Kohn



Voluntary Health Organizations in Canada	Dr. Elizabeth S. L. Govan
Organized Community Health Services	Dr. J. E. F. Hastings
Emerging Patterns in Health Care	Dr. R. Kohn
Economics of Health	Dr. J. J. Madden
Public Finance Aspects of Health Services	Dr. E. J. Hanson
Canadian Economic Growth	Dr. T. M. Brown
National Health Grants Programme	Dr. E. B. Inlow
Voluntary Medical Insurance and Prepayment	Dr. C. H. Berry
Report on the Provision, Distribution, and Cost of Drugs in Canada	Department of National Health and Welfare, Research and Statistics Division

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(1) GREEN BOOK. Report concerning the Manufacture, Distribution and Sale of Drugs, Restrictive Trade Practices Commission, Department of Justice, Ottawa. Available from the Queen's Printer, \$5.00.



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